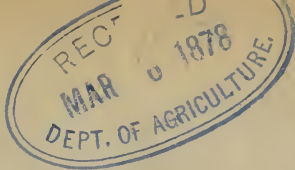


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THE

MARYLAND FARMER:

DEVOTED TO

Agriculture, Horticulture, and Rural Economy.

Vol. XV.

BALTIMORE, JANUARY, 1878.

No. 1.

A Greeting to the New Year, 1878.

The New Year comes smiling, smiling,
While the Old Year hastens away,
Unwilling to be
The one sorrow to see
In a world so enchanting and gay.

There is always a New Year coming;
There is always an Old Year to go;
And never a tear
Drops the happy New Year,
As he scatters his gifts on the snow.

We cordially greet our subscribers and patrons upon the opening of the New Year 1878, with the hope that it may prove one of happiness and prosperity to each and every one. We trust at its close our country will be in as full enjoyment of peace and plenty, as the year 1877 has left us.

The farming interest has much to be thankful for, and to encourage its followers in the heretofore unequalled crops last year of almost all kinds over the whole country, except, perhaps, California. Lands in the Middle States, which for many years have only produced six to twelve bushels of wheat, have, the past year, produced twenty to thirty and forty bushels, superior in quality and weight, both of the grain.

The immense increase of exportation of meats of all sorts, especially fresh beef, live cattle, horses, and sheep; also increased amounts of cheese, butter, lard and condensed milk. Fruits, fresh or canned, or dried have been sent abroad in quantities that astonish those who read the statistics of exports. In all this the farmer and dairyman, horticulturist and manufacturer cannot fail to rejoice and see that the dawn of a prosperous future has again brightened the agricultural horizon.

It is true that money is scarce, taxes high, and thousands of laboring men out of employment, but there are signs of a new and better state of things. Let us all hope and struggle. Let the strictest economy be the order of the day, in public affairs and private business.

Farmers should redouble their efforts, diversify their crops; increase their stock of all kinds; improve their lands; make all they can and spend

as little in useless extravagance of every sort, as possible. Keep books and accounts with the farm and its stock, laborers, etc., as a merchant does with his customers. Charge the farm with interest on the whole cost of it, and all things required to work it, or to make profit out of it; at same time give it credit for house-rent, and everything taken from it for family use, as if you lived in town and the farm was a bank on which you checked for all your household expenses, so that you will know exactly whether farming pays or not, in your individual case. We say it will and it does, if proper credits are given to the farm.

Let it be a rule as far as possible, never to buy anything in way of provisions, that the farm does not produce, and such groceries as are required, should be done without, unless the extra butter, milk, honey, poultry and eggs sold, will cover the cost. In families where there are children of sufficient years and health, inculcate habits of industry in them, by assigning some duty to be performed by each, give to him or her a fair share in the profits; say of poultry, honey, butter, etc., or in a calf, colt or the sheep. These seem to be "trifles light as air," but be assured as the mites make mountains and trivial matters constitute the sum of human happiness or misery, just so these small things, we have taken the liberty to suggest at the beginning of a New Year, for the guidance of our readers, will lead to prosperity, and content and vastly tend to the increase of industry and fondness for the pursuits of rural life in the children of a farmers household.

We trust this year of 1878 will be to one and all a year of plenty and pleasantness and in the words of the gifted poet UNA:

"May our Banner float forever,
And its Stars be clouded never
Till their prototype in heaven
In their skyey scroll are rolled;
With a daylight never-ending,
Sees a new world leap to being
From the ashes of the old."

Agricultural Calendar.

FARM WORK FOR JANUARY.

The out-door work on the farm during this first month of the year is not very pressing, beyond getting wood, rails and fencing material, filling the ice-house, providing provender for the stock, yet there is much in-door work to be done; stripping tobacco, shelling corn for market, cutting up briars and tussocks on low grounds, hauling muck and leaves for the barn yard and compost heaps, making and repairing gates and implements and gears, harness etc.

CORN

Our advice is to sell corn as soon after shucking as possible, if it be dry enough for market. The price at this time is as much as it will likely bring at any time allowing for waste and shrinkage; of the latter few farmers are aware and fewer calculate what they lose by it. We give the results of sundry experiments, and some sensible remarks thereon, which we find in the Country Gentleman, as follows:—

Corn in the ear, after an unusually damp season, was weighed the first of January, and by the following October had lost one fifth part of its bulk.

The weight of corn in the ear, of the northern eight-rowed variety, varied all the way from 68 to 75 pounds, to yield a shelled bushel of 60 pounds. Ears with small cobs, well-dried, afforded scarcely 8 pounds of cobs to the bushel. With larger cobs, freshly husked, they may weigh 12 or 13 pounds. A moist cob is much heavier than a dry one. Farmers who sell corn in the ear should know the amount of loss from drying. As a general rule, a dollar per bushel for corn in the ear in summer is no better than seventy-five cents at husking time.

Sold in the ear, it should always be weighed, not measured. We found that a full, compact, heaped half bushel of moderate sized 8-rowed ears contained 56 ears, weighing 34 pounds. Thrown in loosely and heaped, there were only 44 ears, weighing 19 pounds.

Shelled grain shrinks in bulk and loses in weight, by drying. In one case it lost 1-20th of its bulk and $\frac{1}{4}$ of its weight in three weeks in a room heated with a stove. After some months it shrunk in bulk from its original condition as 6 is to 7, and lost in weight so as to be as 5 is to 6. Other experiments in cold rooms nearly correspond with this in results. It would, therefore, be better to sell shelled corn early in winter at 80 cents than the following summer at \$1. With gourd seed or Dent corn the results may be different, and they always vary some with seasons. Wheat loses much less by drying than corn.

STOCK.

Stock of all kinds require strict attention during the winter season. Feeding should always be done at stated hours. Much depends upon punctual regularity in observing the hours for feeding and watering all animals. The colder the weather,

the more feed and of the best sort is required.

Milch cows must have the best attention and be kept dry and warm. If possible give them steamed cut straw, hay or corn fodder or mill-feed.

Work oxen and mules should have corn and cob ground fine, it is a great saving of grain and long-food both.

Brood mares, in foal ought to have good shelters, and in a lot to themselves to exercise at will.

Young stock:—Keep these well fed and with good beds under dry shelter, in a lot where they can get water and take exercise; handle and fondle them often, so that they become as gentle as house-pets. Much will be gained by such treatment and the same animal will bring twice as much money as it would if reared in the usual old time way of exposure and starvation and no domestication.

THE BARN YARD

Never lose sight of the importance of making the barn-yard your bank upon which you are to draw largely next spring, that which will turn into gold during the year's cropping and much increase your pecuniary resources. Neglect no opportunity to add to its amount by hauling into it, old straw, corn stalks, leaves, muck, rubbish, etc., that the cattle and hogs may work it over and convert it into valuable manure. Once a week make the whole yard white with a dressing of plaster; keep always enough litter over the yard to absorb the liquids, so that the stock will be kept dry.

PLOWING.

Should the weather prove suitable, plow deep all land intended for corn next year, especially all stiff, clayey spots, that the frost may pulverize it and the snows more perfectly give to it, what ever fertilizing quality they possess.

Spring work is greatly lessened and much forwarded by winter plowing. The ground sooner comes into order and put easily in nicer condition for early planting of corn, potatoes, etc.

ICE.

Be sure and secure your supply of ice at the earliest opportunity.

CORN AND COB CRUSHERS, STRAW AND HAY CUTTERS.

For the benefit of such of our readers who may not have read, or who read but did not heed our views expressed in January of last year, we again repeat them, for we write what we know.

These valuable machines, by saving straw, hay and provender and in using up the corn-cobs, save in half a winter their first cost. No farm is complete without these implements, and where corn fodder is abundant, the corn-stalk masticator or lacerator is all important, as it tares to ribbons and

crushes the corn stalk so fine that it is easily eaten by the cattle, and if steamed, makes the best of food if mixed with a little bran or meal. There is much saccharine juice in the stalk that steaming eliminates.

The Young America Corn and Cob Mill is the best to be had, and costs but little. It will crush and grind fine from 10 to 15 bushels in an hour, and will grind corn alone, into meal for family use 5 to 6 bushels an hour. It grinds oats and corn together, or beans and oats which is a valuable mixture for sheep and colts. It will grind rye to mix with cut hay, called "chop," so prized as a food, by all who use draft horses—city rail road companies use for their horses this food extensively. By having this valuable mill, at the small cost of \$50, on a farm much time, labor, and toll will be saved by doing at home with one horse or mule in half the time, what it would cost to send to a mill perhaps ten miles from home. We venture to say that any farmer who has 20 head of stock, if he once tried this improved mill would never be without one. It will last a life-time. Among other advantages, it grinds hominy so valuable as food for poultry, and all stock, particularly old and very young stock.

Hundreds of farmers who have used it will sustain our view of its paramount value to all who raise stock, or who have work horses and oxen and cows enough for a small farm. To graziers and feeders of cattle and sheep and who breed horses on a large scale it is indispensable.

GARDEN WORK.

GARDEN WORK FOR JANUARY.

The country garden will require but little attention this month on the part of the gardener. If however, the work which ought to have been done last month, was neglected, it can now be done. The whole space should be cleaned up, the small fruit trees and bushes, trimmed and mulched with course manure, the salad beds strawed, brushed or covered with leaves, also the strawberry beds. The asparagus and rhubarb beds, raked over and covered well with long manure. All the vacant beds well manured with rotted manure; all stiff ground trenched or deeply spaded and left in the rough for the action of the frost, a little lime might be spread over.

Prepare a hot bed, one 4 feet by 24 would be large enough for an ordinary sized family, in it sow radish, lettuce and corn salad. The radishes will be used before they would interfere with either of the others. Look well to the cold-fames, giving all the sun and air you can and cover over in severely cold weather, the sashes; if water be required, let it be tepid.

For the Maryland Farmer.

NORTHEAST GEORGIA.

BY JAMES T. POWELL

Messrs. Editors.—In answer to numerous letters of inquiry from persons in the over crowded portions of the North and West, and for the purpose of disseminating reliable information in regard to the Northeastern portion of Georgia, so as to enable those who are seeking homes to act intelligently, and at the same time to induce those who are desirous of locating in the South, and building up homes for themselves and their posterity in a mild delightful climate, where they can "worship under their own vine and fig tree, and none dare molest or make them afraid," I have concluded to prepare a few short articles for publication in your valuable and widely extended journal, setting forth some of the many advantages our section of the country offers to the farmer, the mechanic, the laborer and the capitalist.

I shall only attempt, in these articles to give a brief outline under the different headings, of the many interests and advantages, hoping that those who desire further information, will come and see for themselves, feeling satisfied that those who come will be so pleased with our country, that they will settle and remain with us.

LONGITUDE AND LATITUDE.

Northeast Georgia, composed of the counties of Banks, Clarke, Dawson, Fannin, Franklin, Forsyth, Gilmer, Gwinnett, Hall, Hart, Habersham, Jackson, Lumpkin, Madison, Oconee, Pickens, Rabun, Towns, Union and White, is situated in latitude 35° 45' and longitude 84° 23', making this one of the most delightful sections for settlement and residence on the continent.

CLIMATE.

We have one of the most delightful climates in the United States. Our winters are short and mild, not exceeding three or four months in duration, the weather, the greater portion of the time, resembling October weather in the States of Ohio, Indiana, Illinois and Iowa. Our summers are long, but the thermometer seldom reaches above 80°, while the pure, dry, bracing atmosphere and the cool refreshing nights, revives the system after a hard day's work, and enables us to go forth for the next day's labors refreshed and invigorated. The extreme heat which causes sun strokes, never occurs, while the severe, biting cold weather of the North and West is entirely unknown.

HEALTH.

Located in a mountainous section of country, we are entirely free from all of the diseases incident to the lower country and the coast. We are almost entirely free from the all-pervading tendency of the North—consumption. In the county of Rabun, one of the counties composing North-

east Georgia, a death from consumption has never been known. We are also almost entirely free from malarial diseases of all kinds. In fact, our entire section of country is one of the most healthy portions of the United States.

WATER.

□ We have an abundance of pure freestone water, from both wells and springs, for drinking purposes. In fact, no purer, sweeter or healthier water can be found anywhere than that of this section of the State. Besides, we have a great variety of mineral water, among which may be enumerated the New Holland and Sulphur Springs, in Hall county, Porter's Springs in Lumpkin county, Madison Springs, in Madison county, the Helicon and Ferro-Lithic Springs in Clarke county, and the Franklin Springs, in Franklin county, all of which are widely and favorably known for their health giving properties.

SOCIETY.

Our society will compare favorably with that of any other section of the country, either North, South, East or West. In all of the qualities which go to make up a good society, and one in which people delight to live, Northeast Georgia is unsurpassed. Our people are generous, liberal, hospitable, high-toned, refined and cultivated. Every neighborhood has its church and school privileges, and, as a rule, our people are church going people. They are willing and anxious to accord to every one the right of opinion; political and religious, and are desirous of extending the hand of fellowship to all who may come amongst us, to aid in building up our waste places and making this what nature intended it should be, the garden spot of America.

SCENERY.

The finest scenery in the State is in Northeast Georgia. A view from one of the peaks of the many mountains, is perfectly magnificent; while the Toccoa and Tullulah Falls almost equal the far-famed Niagara, in their grandeur and splendor. At Toccoa, the water falls over a rock to the basin below, a distance of an hundred and eighty feet, in a perpendicular line. At Tullulah there is a succession of falls, amounting in all to fifteen hundred feet. In addition to these, we have a number of other beautiful and grand natural scenes, that are unsurpassed for their beauty and magnificence, and such as would form a field of delightful study for the artist or the painter.

EDUCATIONAL INTERESTS.

Perhaps no section of the country possesses as many really good educational advantages as are to be found in Northeast Georgia. In almost every county of which it is composed, we have one or more schools of a high grade, besides numerous schools of the lower grades, all conducted in the very best style, and presided over by teachers well qualified for the responsible position of trainers of the minds of the youth.

In Clarke county we have the State University one of the best and most successful Universities in the whole country. This University was established in 1801, and has been in successful operation

from that day to the present time, a period of seventy-six years, with the exception of a short time during the late war, when it was temporarily closed.

In connection with the University is the State College of Agriculture and the Mechanic arts, and a first-class law school, located in Athens, the State Medical College, located in Augusta, and the North Georgia Agricultural College, located at Dahlonega. There are, also, in Athens, the Lucy Cobb Institute and the Home School, neither of which can easily be surpassed, as institutions for the thorough education of young ladies. There are also two other High Schools for the education of young men, and to prepare them either for college or for the active duties of life.

In Jackson county we have the Martin Institute, for the education of both sexes, an institution of which any people may well feel proud.

In Gainesville, in Hall county, we have the Gainesville College, for the education of both sexes where a thorough education may be obtained.

We also have the Rabun Gap High School, in Rabun county, and several others of a high order.

Our public school system, though not so perfect as might be desired, has, under the management of our able State School Commissioner, improved very much during the past year or two, and under the provisions of our new Constitution, will, in a short while, become a source of pride to our entire State. At present, we have public schools scattered all over our country for a portion of the year, where the children are taught in all of the lower branches, of an English education. The teachers of these schools, as a general thing, are selected for their qualifications as teachers.

North Carolina—Its Resources, Climate, and General Advantages, &c.

The following letter from the eminent Commissioner of Agriculture of that State, explains itself, and will be read with great interest. It is an able paper, and gives all the information desired by the numerous enquirers, who write to us, with a view of "going South," as they say, and asking questions about the relative advantages of different States, which we are not always competent to answer in detail.

While we would gladly receive within the limits of old Maryland all emigrants, we feel bound to give our Southern Sister-States their respective dues, and throw no impediment in the way of their filling up their waste places with enterprising yeomen.

For the Maryland Farmer.

Office of the Department of Agriculture.

RALEIGH, N. C., Nov. 28th, 1877.

Mr. E. Whitman, Baltimore, Md.

MY DEAR SIR:—Your very kind favor of the 12th inst., in which you do me the honor to ask for information in regard to our State, for publication in your valuable journal, would have received at-

tention earlier, but for my absence. I hasten to avail myself of your proffered kindness, and do so the more readily, since while complying with your request, I may in some measure meet the actively increasing demand for information, in your own and the more Northern States, as is evinced by the numerous letters of enquiry daily received at this office.

The state of North Carolina contains an area of 50,704 square miles, making it in extent about the same as that of the state of New York. It extends from the Atlantic Ocean westward 485 miles—one hundred miles beyond the Blue Ridge mountains—giving it a greater breadth of longitude than any of the original thirteen states, and is included between the parallels of 34 degrees and 36½ degrees. It is naturally divided into three sections—the eastern, middle, and western. The eastern section is nearly level—with a soil sandy and alluvial, large areas of which are underlaid with immense beds of valuable marl, and extends from the sea coast westward about 150 miles, or to a line drawn from the North to the South across the state, and passing a little east of Raleigh. The middle section extends from this line where its elevation is 200 to 300 feet, to the base of the mountain range where it reaches an elevation of about 1200 feet. The western section extends to the Tennessee line, embracing the mountainous *plateau*, with an elevation of about 2,500 feet through which run chains of Mountains, some of whose peaks reach an elevation of nearly 7,000 feet—the highest east of the Rocky Mountains.

In the east, the Pine predominates, yet vast quantities of Cypress, Juniper and other valuable timbers are found. The middle and western sections are covered with magnificent forests of oaks, hickory, walnut, poplar, &c., &c.

Gradually sloping from the mountains to the sea, and traversed by seven large rivers, which are fed by numerous tributaries, we have one of the finest watered, and best drained countries in the world. Our water powers are simply immense—sufficient for a continent, and are not confined to the mountain region as many would naturally suppose, but are found in all sections of the state.

We have over 1100 miles of railroads in operation, with an inland navigation of about 900 miles, which can be greatly increased, affording us access to the markets of Charleston, Wilmington, Newbern, Norfolk and Richmond, and an outlet to the great markets of the world. To this I may add other projected lines of railway, whose completion will greatly enlarge our facilities for transportation and commercial intercourse, and prominent among

which, is the Western North Carolina Railroad, which when completed, with its contemplated connections, will traverse the whole length of the state, and furnish the shortest route from the Mississippi Valley to the Atlantic Coast.

Within the comprehensive range of our climate, varying almost imperceptibly in its gradations as we go from east to west, a person coming from the Gulf States or from New York, can here find a temperature congenial and familiar. The annual rain fall is 45 inches. Cloudy days 130—rainy rainy days 60, in the year. Annual mean temperature 60 degrees (Fahrenheit)—mean summer temperature 75 degrees—mean Winter 43 degrees—this, in the middle section, where is found the average climate.

To illustrate the great diversity of our soil and climate, I may state that we grow successfully, every product mentioned in the United States census, with perhaps one or two unimportant exceptions, and I may add, that as much may be truthfully said for the capabilities of thousands of single farms in the state.

The absurdity of the stereotyped fallacy, as taught in the school geographies and other primary text books of the country, (and which is being propagated by a "coat of arms" recently invented for our State, and is an admirable advertisement of the ridiculous ignorance of the inventor,) that our "chief productions are tar, pitch and turpentine" can be easily demonstrated to any one who will visit the Agricultural and Geological Museums of our Department. Only 60 counties partially represented in their agricultural products, but we have displayed here, specimens of corn, cotton, tobacco, wheat, oats, rye, barley, buckwheat, rice, millet, peas, peanuts, chufas, beans, molasses, dried fruits, flax, jute, and a great variety of native and cultivated grasses, which for variety and quality will compare with similar products from any other State in the Union. Tobacco and wheat from counties lying immediately on the sea coast, comparing favorably with that produced, west of the mountains, and at an elevation of over 2,000 feet. The Scuppernong Grape—a native of this section is a prolific and never-failing producer, and grows to greater perfection here than anywhere else; other varieties do well. Sweet potatoes and all garden vegetables grow finely; and when we remember that almost every farm is within easy reach of either a railroad or navigable water, thus placing the producer within a few hours of the markets of Norfolk, Baltimore, Philadelphia and New York, and that their products are marketable from one to three weeks earlier than those of Virginia, Maryland,

Pennsylvania and New Jersey, it will be readily seen what advantage it gives this section, for successful prosecution of that profitable, and now, rapidly growing industry.

Our first experiment with jute, made this year, in eastern counties, under the direction of this department, was a gratifying success, and warrants the belief that a large area of the eastern section is admirably adapted to its profitable production.

The middle section produces in addition to nearly all the crops enumerated, all the grasses, cereals tobacco, &c., in great perfection. So of the western section, except as to cotton. Besides the Scuppernong, the Lincoln, the Catawba and Isabella—which are native grapes—and foreign varieties are cultivated with success. Apples grow well in every County in the State, I believe, and ripen from May until November. As to the superiority of this fruit, I may state that at our recent State Fair, an exhibition was made from several counties, and quantities of them weighed over one pound, while some weighed as much as two pounds. This came from the counties to which were awarded the premiums at the Centennial, and at the National Pomological Display in Baltimore, this fall. Peaches and pears of superior size and flavor are grown in almost all the counties, especially, those of the middle section. There are hundreds of acres of native strawberries and cranberries in the middle and western sections. Blackberries flourish in all parts of the State, and the large quantities that are being dried and shipped annually, bring to our people a handsome revenue. According to reports made to this office, over six million pounds of dried fruit had been shipped from our state during the season, up to the 1st of October. The rapid transit of our fruits to northern markets, placing it as we did during the past season, in Washington market in the city of New York within 18 hours, from the time it was plucked in our orchards, and by its superior excellence commanding the highest market prices, will greatly stimulate this important and rapidly growing interest in all its branches. The mildness and uniformity of our climate and the length of our growing season with the steadily increasing demand for our fruits, will without doubt in a few years, build up for our State, an important and extensive fruit trade. In addition, I will mention that the traffic in medicinal herbs and roots which are gathered from our western counties, is of no inconsiderable importance—approximating perhaps, this year, a half million of dollars.

Our summers are longer, but not more oppressive than in the States of Pennsylvania and New York,

while our winters are far less rigorous. We perhaps have snow as often as in those States; but it seldom lies on the ground a week. Out door work is rarely suspended for more than 2 or 3 days at a time. Cattle, sheep, and hogs, are not kept sheltered and fed, except for the purpose of fattening. The work for winter is fencing, plowing, ditching, clearing lands, repairing and building houses, composting, &c. Of the 48 cotton factories and 3 woolen mills reported to this office in 26 counties in different sections of the State, all state that their work is never suspended on account of cold weather. Sheep and hog raising can be made profitable in all sections, while the luxuriant growth of the native and cultivated grasses throughout the middle and western sections renders success in stock raising in these sections, of easy attainment.

In the general wreck wrought by the war, no interest was more seriously damaged, perhaps, than our educational system; but with returning prosperity, comes a renewed interest among our people, in this important matter. Liberal provision is made by law, for the support of common schools, which are required to be open 4 months, in each school district, into which the counties are divided. No discrimination is made on account of race, except that the colored and white children are taught in separate schools. In addition to our University, we have 4 male colleges and 8 female colleges, and numerous high schools for both sexes, all of the highest order.

Our homestead laws secure to the owner, personal property to the amount of \$500, and homestead, with dwelling and buildings to the amount of \$1,000. Insurance effected on the life of the husband for the benefit of his family, is free from all claims of creditors. Married women hold all property owned before, or acquired after marriage, against any debt or obligation of the husband. The mechanic and laborer's lien law is liberal and affords ample protection. All property subject to sale for taxes. No town, city, county or other municipal corporation can levy or impose any tax without the authority of a majority of the qualified voters, except for necessary expenses.

As to the vastness of the mineral wealth of our State, which, for variety, is certainly not equaled, and in value is not surpassed in any State in the Union—I have said nothing. Prof. W. C. Kerr, our State Geologist, who, as a Scientist, stands among the very foremost of his profession, after a study and investigation of sixteen years, says:

"Nature has denied us only two of the more important mineral deposits—salt and gypsum, (and

they may yet be discovered in the sand-stone of the coal.) But of these two there is an unlimited store just across our borders, within easy reach by a railroad, of our net work of railroads and of our rivers. Our resources of iron, coal and lime, of gold, copper and mica, and the great variety of other minerals of subordinate, but real and increasing value, is sufficient to warrant the assertion that our State has here the foundation of indefinite wealth and prosperity."

Our mineral springs, which are numerous, are fast gaining a wide and merited reputation for their valuable and medicinal properties—and as popular resorts, are visited annually by increasing numbers, from all sections of the Country.

The statistics of crime and our court records will sustain me in the assertion that a more law-abiding people than ours, cannot be found in the world. And in further proof, I may instance the fact that last year we had a political campaign in which partisan zeal was never higher, nor more conspicuously displayed, involving as it did a triumph of doubtful issue, to the leaders of both parties, and yet in the 85 counties canvassed by our Gubernatorial Candidates, not a single arrest was made for turbulent disturbance of the peace. Again while the great wave of violence and disorder was raging, which swept across the Northern section last summer, and the Governors of those States were daily, and hourly importuning the aid of the military arm of the government, our Chief Executive—confidently relying on the law abiding, peace loving character of a people, who have always been distinguished for these virtues and their conservatism in all things—spent a quiet and pleasant visit among his friends, in the mountains, while "the peace and dignity of the State" so far as it was dependent on the the military force, rested securely in the hands of a single sergeant of the U. S. Army. Again—our recent State Fair, when from 8,000 to 15,000 persons, from all parts of the State, visited the grounds daily, during the week, only 14 policemen were on duty, and not an arrest was made.

Now that the passions are fast subsiding in both sections, which were engendered by the war, and which through the wicked machinations of designing, corrupt men, have so long be-clouded the eye of Justice. Now that our local governments are justly and peacefully administered by true and devoted sons—our people are beginning to feel that a better day is in store for us, and banishing as best they may, idle grief over the wreck of old and long cherished systems, are manfully, cheerfully and hopefully addressing themselves to the

task of working out and constructing a new economy from the ruins.

I have thus hurriedly and imperfectly treated only such matters appertaining to our State, as I think may best meet the enquiries of those desiring the information, and as a due regard for your interest and courtesy, will permit. While forced to omit much of interest and importance, yet, in what I have said, I have endeavored to avoid exaggeration.

We need and want immigrants to come and occupy and utilize our vast unemployed domain. Lands can be bought at prices ranging from one dollar to one hundred dollars per acre. The general price of improved farming lands is from \$5 to \$15 per acre.

Two years ago a provision was incorporated into our Constitution requiring the Legislature to establish this Department. In pursuance to that requirement, that body at its recent session created the Department, and established in connection with it a "Land and Mining Registry" for the sale of lands, under the direct control of the State Board of Agriculture, of which his Excellency the Governor is made ex-officio chairman. This branch of the Department is now in full working order. We have registered about 70,000 acres from various parts of the State, representing farming lands, water powers, mining property, town property, &c. The only charges made are 2½ per cent. commission on the sale, to be paid to the Department by the owner. Description, prices, terms, &c., made by the owner and registered in this office. Questions as to validity of title are investigated by the Attorney General of the State. In our Agricultural and Geological Museums which are connected with this office, may be found specimens of the native products of each county. It will be seen at once that the very best security is given the purchaser against fraud and imposition. He has here, for his benefit and information, the description, price and products of the lands he may wish to examine, with every facility cheerfully afforded him, to acquaint himself with the character of all sections of the State.

With all her splendid advantages, North Carolina is not an El Dorado, where genteel loafers and lazy, thriftless idlers may grow fat. We are not encouraging additions to that class of our population. But it is a State where a man who is willing and able to work always finds his reward. We want *neighbors* rather than *mere laborers*. We want men who have enough capital at least, either in money or in energy and good character, to buy them homes, be they ever so humble, and settle down with the purpose of being good and worthy citizens. To such men, our whole people would extend a hearty and cordial welcome. I have the honor to be sir, most respectfully,

L. L. POLK,
Commissioner of Agriculture.

For the Maryland Farmer,

The Question of Labor in Agricultural Colleges.

Mr. Editor:—Since the publication of my report of the discussion upon Industrial Labor in our Colleges, my attention has been directed to a similar discussion lately held in California, which I propose to give to your readers, especially as the question is put now, attracting the attention of thinking men.

The value of an educational system, like any other, depends upon the amount of good it can accomplish. Taking it for granted that those who have the subject matter in charge are really interested in its successful operation, we at once see that crude ideas, under the guidance of warm hearts determined wills and thinking minds, must eventually be moulded into matured policies.

These discussions, then, are leading us on to the development of the true line of work, which, in this country, is only about to begin. It is true, the foundation has been already built. Under the law which creates these institutions, that foundation is broad, enduring, catholic. Judgment, moderation, zeal and determination are necessary agents to the work of erecting the superstructure.

The work has already begun. Its completion depends as much upon the American people, as upon its agents and guardians. That the agricultural interests of a nation, which is only excelled in territory by China and Russia in Asia, must continue to move on to be the first interest, in point of wealth and power, cannot for a moment be doubted.

Out of an accumulated wealth of \$30,068,000,000 Agriculture has, as yet, contributed from products, but \$2,447,000,000. When we are forced to feed four times our 40,000,000 of hungry people, we will begin to understand the meaning of "high culture" in both field and mind. In short, we are, yet, as a people, to be awakened up to the necessity of an agricultural education. In the mean time, those who really wish to see the work of their lives a success; I mean the faithful teachers of the land soldiers, who bear all the brunt of the battle, cherished not, doubted, patient; will continue to consult, to rebuild, to revise, and to hope on, until the future gives them but a meagre reward. When the value of individual education in our Colleges was lately under consideration in the agricultural convention, that I might concentrate the discussion, I asked these questions.

"Are our Colleges designed to produce educators practical tillers of the soil, or both? Is our present course of four years sufficient to develop scientific knowledge, and yet require one half or one

third of that time in manual labor? An educational system, infinitely superior to ours, was under consideration, and it was to this system, that I wished to direct attention, when I doubted if we could do the work assigned us in the time allowed to do it. The whole time consumed in the gradual development of a student of agricultural science under the Bavarian system, is not less than fifteen years.

We are expected to do the same work in less than half that time. Hence, I thought the American system demanded too much of its educators; that its Public Schools failed to prepare applicants to enter a High College course; that we are asked to drill students in the workshop, and upon the farm, one half of the time allowed us, and yet, are expected to turn out leaders in a profession, which more than any other, needs general knowledge and that most thorough. I thought it an impossibility, I think so still; nor do I stand alone in that opinion, now for the present, at least, as long as applicants, who knock at our doors, cannot enter the regular College course, duty to our State requires us to receive them into a Preparatory Department which by drill in field and lecture room, shall prepare them for the course.

This arrangement gives us good, pliant material ready to be moulded to the requirements of an agricultural education, which can be extended two years longer.

The discussion lately held in California, was to test the feasibility of introducing industrial labor into the Public Schools of that State, as an experiment. The report of the Committee was exhaustive, adverse, and ably sustained by the leading men of the State. As the State was not compelled to furnish labor to idle hands, so it was under no obligation to give each idle boy an industrial education. The opposite view verges upon communism. Those who favored it, looked upon education as only an experiment, and if that experiment could take the idle boy from the street, and make a useful man out of him, it was worth the trial. It would be a strike at crime and in favor of morality.

Professor Kellogg of the University of California, said, "he objected to the system of giving industrial education in this connection, because he thought the burden of its cost would break down the schools. He knew that hard-working teachers were already engaged in the dignity and manliness of labor. We have already too many studies and our teachers are beginning to realize it. There is no time to spare for the farm and work-shop. It seems that labor and education are two different things. They

ought not to be joined together. If they are combined, we shall gain nothing in labor and lose much in the progress of the mind."

Professor Hillgard of the same University, went further than this; "He denied in toto the eminent success claimed for many Agricultural Colleges, citing among other failures, the Colleges of Michigan, Kansas and Missouri. His idea is, that theory should be taught and practiced in the laboratory, and that manual labor should not be attempted."

Yours truly,

T. D. Warfield.

Ammoniated Manures.

The subject of this communication is of so much importance, and I have spent so much time in looking into it, that I desire to draw the attention of your readers to the importance of making their own experiments, rather than depending upon the opinions of others, who base their conclusions upon results obtained in a small way, or in some hot-house experiments, or in some other equally uncertain location. I am well aware of the task before me in combating scientific and learned men, but with a firm conviction of the truth of my cause, I now state it in a few words:

The artificial application of ammonia, or organic matter containing it, to land as plant food, is unnecessary, and every dollar spent by the farmer for it is a waste—a useless expenditure—and I propose to defend my position by giving the results of some of my experiments, which have extended through ten short years, and my regret is, that I have so few such periods left to devote to the same cause. It will be a long story to go over all the experiments, the result of which has opened up the error which I think many chemists have fallen into, in placing ammonia at the top of the ladder in estimating the value of fertilizers. Valuable as it undoubtedly is (not more so than water) in the development of organic life, along with its closely-allied friends and co-laborers, carbonic acid, water and heat—all of which are kindly supplied by nature—I claim that the atmosphere containing 78 per cent. of nitrogen (the base of ammonia) furnishes the supply, as it does of carbon with only two per cent. of the latter as carbonic acid—the source of all charcoal found in plants and trees. In what condition ammonia reaches the earth, I cannot say, but from the well known fact of the immense deposits of nitrates (combinations of nitrogen and oxygen) it is no more than fair to admit the truth of what many chemists claim, that nitric acid is formed in the air, which in turn

unites with another form of nitrogen (ammonia) forming a harmless salt, reach the earth by the ordinary channels. What a wonderful chemical fact! Nitric acid (*aqua fortis*), our most corrosive acid and ammonia, one of our most caustic alkalies and a powerful base, and yet both are formed from the air we breathe and the water we drink! There is no other source for it, and hence the fountains from which all organizations receive their supply must be through the falling rains and soothing dews, instead of by every stinking, rotten thing the fertilizing men can get hold of, from rotten fish, putrid blood, burnt cracklings, and every other similar matter, which is palmed off on the poor farmer as just the thing for wheat, tobacco, cotton &c.,—many thinking that without the stink there can be no virtue in it. God never gave us such stuff for plant food. On the contrary He gave sweet, pure air, distilled water, the rays of the glorious sun, and the pure deposits from the plutonic rocks, doubly purified by fire and heat. The stink is merely an evidence of the putrefaction or slow combustion, the mineral matter or ash aiming towards the earth, and the gases to their home in the air (hence the smell), to be purified and again returned as water, carbonic acid nitrogen and oxygen, to bring into existence new life in the shape of living plants, which in due time pass into animal life, and again to their old home, and so on.

In a letter written in August last. Prof. S. W. Johnson stated that natural plants obtain their ammonia from the air, while cultivated ones require assistance from the hand of man in the way of an artificial application of ammoniacal matter, or at least, the soil must contain humus, which furnishes the ammonia. Now for my last experiment. The last of August, after one of the driest summers ever known on the Chesapeake, I had collected a large pile of dry wood, such as old stumps, brush, &c., and piled them in a lot covering about ten feet square, and burned them. The heat was intense, and the ground very dry, and all vestiges of organic matter seemed to be destroyed for some inches below the surface. The earth was stirred up and mixed with burning coals. On the 9th of September, the charcoal and a portion of the ashes were removed, and after a good rain, wheat was sowed on the burnt spot, and now I have a splendid growth of rich, green blades, and if they produce heads as they did from a similar experiment made three years ago planted four inches apart, one hundred bushels per acre would be a small estimate. Some of the blades are now (October 10) 12 inches above the ground with roots 4 or 5 below

and I feel sure will, like the other result, have from 30 to 40 heads of wheat to each seed, averaging from 20 to 60 grains to each head, as the others had. Was there enough ammonia or humus left in the soil to produce this result, or did the gentle rain, just previously fallen, bring with it the usually accompanying companions, ammonia and carbonic acid, to furnish the necessary quantity? I have many more results, which justify me in doubting the necessity of applying such stinking stuff, as is done at an enormous expense, just to supply what nature is doing in all its purity, only unorganized. The truth is what I am after, and if I am right in giving kind nature credit, let all unite in disabusing the popular mind of the idea that plant food must stink.

A very responsible manufacturer of a fertilizer in our city, has been making a superphosphate from the white bone ash from South America—virtually a mineral phosphate—and with such results from its application to poor land as to astonish every one. Parties who have used it assure me they have never had such results. One informed me that from a field not producing five bushels of wheat to the acre three years ago, he has just threshed out twenty-three bushels of fine heavy wheat, and this is the story I hear from all who have used it. Surely the ammonia in bone ash did not do it. Mr. J. B. Emory, of our city, a reliable granite-worker, when I applied to him for granite dust to experiment with, informed me that some years ago his yard was along side of an enclosed lot, and the dust settling on the grass produced remarkable effect in the growth and color of it, and it was common talk among the workmen. Can there be any consolation to the advocates of stinking stuff in this fact? (Like results have been observed in England; see Johnston's lectures, page 361.) There was no ammonia here, but the fine dust being soluble in the rain furnishes potash, magnesia and other necessary inorganic elements to the struggling plant.

Several years ago, while on a visit to the Miami Valley, Ohio, an old gentleman pointed out to me a field of corn that, to his certain knowledge, had been in corn for sixty years, yielding from sixty to seventy-five bushels of shelled corn to the acre, without ever having had a shovelful of manure on it. The slight deposit of mineral matter from the overflowing stream rendered assistance to the gaseous matter furnished by nature. On a 20 acre field of my own that ten years ago would hardly sprout peas, hundreds of tons of timothy hay, wheat corn, oats and fodder have been taken, and it now has a beautiful growth of timothy and clover, af-

fording fine pasture for my stock of horses and cows—the latter furnishing a bountiful supply of milk and butter—on a farm on which, when purchased, such food was almost unknown; and I have used no ammoniated fertilizers, but only such mineral matter as lime, plaster, bone black and bone ash—the latter two treated with sulphuric and muriatic acids, and dried with air-slaked lime and ashes collected on the place. Having had occasion to burn several cords of hickory and oak wood one season, the white ashes were carefully collected and applied to a row of corn in the hill. I have never seen better results, and from a few ears carefully weighed I calculated there would have been 125 bushels of shelled corn to the acre, had every hill turned out as well as those weighed. Some of the ears shelled 14 to 15 ounces of shelled corn, I think no farmer can doubt the efficacy of good ashes, and yet no chemist will claim any ammonia for them.

These and numerous other facts are what I base my theory upon, and leave to the reader to say whether I have any grounds for my claim. Farmers, and especially our Southern farmers, must become more practical, and by experiment find out what their land needs. Sixteen per cent. ammonia was formerly necessary to make a good fertilizer; now three per cent, is ample. What will be the next per cent?

In conclusion, one word for ammonia. Without question it acts like a stimulant, and I give the result of it. In the Spring of 1876 (March 23), I selected two spots in the wheat field to test it, using two salts, the nitrate and sulphate. Both salts were dissolved in the proper quantity of water, and with a watering-can the two spots were sprinkled. Visiting the farm the latter part of April, a marked difference was observed. The wheat and timothy had a rank growth much ahead of the other. Towards harvest the other was little behind it, and at harvest the ammoniated wheat and grass were on the ground; and while the main field was fully ripe the other remained green, and if there was any difference in the heads it was certainly in favor of the main field, and to this day the ammoniated spots can be detected by the absence of grass; indeed, they are almost bare. Alongside of the solution, powdered dolomite (magnesia limestone) was applied with marked results, indicating the necessity of magnesia for my soil, as pure lime failed to show any result. A new-born baby may thrive awhile on sugar and wine, and might take on some fat, but by walking time he would be like the wheat—flat on the floor, in an unhealthy condition, without bone or muscle, good milk will serve a better pur-

pose, and the proper mineral elements will serve equally well for the farmer.—*A. P. Sharp, Baltimore Co., Md. in the Country Gentleman.*

The above is a valuable paper, and advances views at variance with some learned scientists. It is well worth serious reflection and doubtless will call forth discussions and, replies by those who differ in theory, and some who are interested in the manufacture of fertilizers. It is a great question which should be fully ventilated.—[Eds. Md. Farmer.

For the Maryland Farmer:

FOREST TREES.

Col. W. W. W. Bowie,

Editor "Maryland Farmer."

DEAR SIR :—Among the popular heresies relating to the subjects of forests, none is more common than, that the farmers are the only ones directly interested therein. Every town interested in commerce and manufactures, has a deep and literally vital concern in the question. The climatic influence of the woodland on the rainfall (not to any great extent in increasing it), but in regulating it is simply incalculable. A proper arborescent distribution is, in fact, the only means of so conserving pluvial conditions, as to make the streams reliable for inland navigational purposes; and for hydraulic power for driving operative machinery. It follows, therefore, that the life of these towns, being these elements of transit and of skilled industries, dwellers in cities and towns, as well as the rural population, whose homes are on the farms, on the mountains, or in the vallies, are deeply concerned in forests.

There has often been too much of overstraining the financial nerves of States and communities, to build railways where water transit, requiring only one-eighth the traction of moving freight by steam cars would have been sufficient. We have hosts of streams winding their way among the homes of our people, the latter never dreamed that by improvement similar to those in Europe, these would be amply sufficient for passenger and freight transit, provided the flow of water was uniform. The wholesale deforestation of the regions through which they flow, however, has robbed these water courses of their equableness. They are now vexed by two spirits of destruction, either of which make them unavailable for purposes of transportation. In the stormy season of the year they become, through excess of water, uncontrollable, as the torrent demon holds wild revelry along the valley; through the same cause, also its bed becomes so silted as to be obstructed with shallows and bars

made up of the soil robbed from the uplands. Anon, the river sleeps through influence of the rainfall being withheld till it becomes too feeble to bear even a canoe on its bosom at the very time when the ship or the steamer should have a free pathway there. The drought demon now has sway, and the keels of commerce may not pass that way—thus things go on till the river is ruined, not only for the present, but for all time to come, unless the children are wiser than their fathers. If they invite the Queen of the Silva to resume her throne, she will lay a gentle but potent hand on both the flood and the drought, frequent and gentle showers will, again, take the place of the furious rains coming at longer intervals, and the rivers will again roll with an evenness of flow which will make them of service both to navigation and to manufactures. A practical proof of this philosophy in respect to destruction of navigation may be seen near Bladensburg, Maryland; there the student of this subject may see the remains of a wharf on high dry ground yards away from the nearest margin of the stream. Here, a few generations ago, ships that crossed the sea, are said to have loaded and unloaded cargo; now, except at high water, a skiff could hardly pass along. The same line of thought applies to manufacturing interests; if the stream is reliable, manufacturing may be driven by it, which will add millions annually, to productive industry, and thousands to the inhabitants—both population and manufactures will increase every year; if the stream is not reliable the manufactures and the therewith population will pass away from many a place on its banks: many such a point has, for these reasons, tens, hundreds of thousands, or even millions of dollars involved in the subject of forests; the forest is the only influence which can save the stream which is the soul of these material interests.

Another heresy is the need of land for Agriculture demanding this wholesale tree cutting. An acre properly watered by well distributed rainfalls will yield from two to ten times as much in a series of years, as it will if its crops are alternately drenched and parched over.

Other questions equalizing thermal conditions, hygiene, fuel, &c., &c., might be discussed also if space permitted—the above being true of the interests of minor towns and cities in this subject, the arguments culminate intensely to prove that the great trade centre should arouse and act; Boards of Trade and Chambers of Commerce cannot afford to fail to demand that State legislatures and the general government come to the rescue.

The aggregate average annual agricultural yield of large sections of our grain, cotton and fruit

growing regions, would be doubled by multiplying their wooded surfaces by two, and divide their cultivated surfaces by the same number. This is simply by distribution of rainfall, short crops from drought one year, and rotted ones from excessive rain, another, would thus be modified so as to give these comparative results.

If to this were added really scientific culture of the crops, they would be quadruple.

Yours, for the Forests of our Fatherland.

GEO. MAY POWELL.

For the Maryland Farmer.

INDIAN CORN MAIZE.

This is, undoubtedly, our great American grain—our National crop—and too much consideration cannot well be given to it, particularly at this time when special effort is being made to have it better known in the old world as human food, it being liable to become more damaged by long voyages than wheat; it has not, hitherto, been so much exported as its importance and food-value entitled it to; but now that our ocean voyages are much more speedy than formerly, and improved modes are designed, this grain can be as surely exported as others.

I am sometimes accused of running "hobbys;" this is not quite true; when fully convinced myself of a great good, I am quite earnest and persistent in trying to enforce the same conviction upon the public mind for the public good.

Years ago, 1858, I had the pleasure of hearing the late Hon. C. B. Calvert make a noble and eloquent appeal in behalf of this splendid grain, at a meeting of agriculturists assembled at the Smithsonian Institute, in Washington D. C., which has never been forgotten by me, being in accord with my views on the subject of Indian Corn.

And now that it begins to be better understood and appreciated in European countries it possesses an added interest, and should receive more attention at the hands of American growers. It is suited and can be adapted to more uses than any other grain, and its production, in the long run, is more profitable than wheat, and it exhausts the soil less, while it is also, by its cultivation, an excellent preparation for the latter named grain.

In Illinois, several years ago, the writer of this, put in five acres each, of corn and spring wheat, on equally good rich land, which was deeply plowed in the fall, left to be pulverized and ameliorated by the action of frost and weather all the winter; then in the spring the land was again plowed more shallow. From the five acres in corn—the large white dent variety—505 bushels of good shelled corn were obtained, 56 lbs to the measured bushel

being 101 bushels to the acre, at a cost of about 25 cents per bushel, including interest and taxes on the land, making the whole cost of the crop \$126.25. It sold for 30 cents per bushel—\$151.50 value of crop, besides the stalks and fodder—half that value. The five acres in spring wheat, yielded 27 bushels per acre, 135 bushels, at a cost of 50 cents per bushel, and sold for 70 cents per bushel; cost of 135 bushels \$67.50; sold for \$94.50; and every farmer knows that the fodder and stalks from an acre of corn is worth considerably more than the straw from an acre of wheat, at least some do. Both crops were gotten off the ground in good season, and the whole ten acres were plowed about seven inches deep that fall, left for the winter, and in the spring the land was all sown to spring wheat, and all treated just exactly alike.

From the five acres on which the corn previously grew, 30 bushels per acre, of good wheat, were harvested, while from the five acres on which wheat grew, the previous season, only 26 bushels per acre of wheat were obtained at this second harvest; showing clearly that the corn was less exhaustive to the soil, and is an excellent preparation for a succeeding crop of wheat. These facts are given for those who may wish to consider them, and act upon them.

D. S. C.

MR. WINANS'S RUSSIAN TEAMS.—The four Russian trotters purchased by Mr. Thomas Winans from Lieutenant Ismailoff, in New York, have arrived in this city in charge of the Lieutenant and his Russian stableman. The animals consist of two gray and one black stallion and a brown mare. The stallions 4, 5 and 6 years of age, and the mare 5 years. The dam of the grays took the first prize at Paris in 1867. They are said to be able to trot a mile in 2:25, and are all of pure Arabian stock known as Orloff. Mr. Winans paid a high price for the animals, which he purchased chiefly for breeding purposes, but will also use them occasionally for driving.

This is another instance of the enterprise of Mr. Winans. We wish him success in his effort to improve our stock of useful, carriage and work-horses for quick draft. No doubt that an infusion of this new blood will greatly improve the stock of Maryland horses for both the saddle and harness. What Arabians have done toward the perfection of the English racing stock, this Orloff breed may accomplish in another more useful line, by crossing with fine common-blood mares in our state. It is to be desired that Mr. W. will give every facility to farmer's to improve their stock of improved trotters, coach horses and saddle-horses. The latter have been too much neglected of late years.

Live Stock Register.

HEREFORD CATTLE.

To the Editors of the Maryland Farmer :

DEAR SIRs:—I am obliged, by your request, for information respecting Hereford's, and herewith submit several papers, from persons of large experience, together with a record, extending back nearly one hundred years. The electrotypes of Sir Benjamin, H. B., 1387, and a four years old Hereford Ox, are from photographs. Miss Monk, imported by me in 1870, is a direct representative of Sir Benjamin, her bull calf, Richard 3d, now the property of Dr. Wm. H. DeCoursey, of Queen Anne's County, is a fine specimen of his race. For the information of our readers, who might conclude, that there are no good milkers among the Herefords, I submit the result of the yield of three cows on evening of 8th, and morning of 9th, June, 1877. Fair Lady, calved 22d February, 1877, yielded 4 galls., 3 qt. Agnes, calved May 10th, 1877, yielded 4 galls., 1 qt. Mary, calved 22d May, 1877, yielded 5 galls., 1 qt. Total 14 galls., 1 qt., 1 pt., an average of 4 galls., 3 pts., $\frac{1}{3}$ pt. The cow Agnes, is now eleven years old, for the week ending 25th June, 1874, we made from her milk 12 lbs., 10 oz. Butter.

I could say much more upon the subject of Herefords, but in the accompanying papers, there is so much *truth*, based upon *experience*, upon which *alone* the readers of agricultural journals should be instructed, that I desist, and will only add what a distinguished journal says:—

"Between the Herefords and the Short-horns there has been a strong competition for one hundred years. The contest is fairly reduced to these two breeds. Other breeds have been created and have had their time—they have had their merit. To-day the Herefords and Short-horns are the two breeds of cattle that command the attention of breeders and feeders in England more exclusively than all others. Each mature early; each make large weights; neither can claim an advantage on these points. The Hereford is the best grazer and the best feeder—he will make an equal gain on 25 per cent. less feed. The Hereford is the best quality—in the English market he will command from one-half to one cent more per pound. Thus much for the two breeds."

Very respectfully, yours,

JOHN MERRYMAN.

Hayfields, Nov. 20th, 1877.

Mr. T. L. Miller of Will county, Ills, who is very extensively engaged in stock breeding, thus writes about :

THE HEREFORDS AND THE FUTURE BEEF TRADE OF THE COUNTRY

They have stood in the English markets for one hundred years as the best cattle, commanding the highest prices. Youatt says of them, they fatten speedily at an early age, and few cattle are more highly prized in the English markets. At the Smithfield Show they have taken more premiums than any other breed. They show the best weight and highest quality.

The Hereford steer stands pre-eminently above all other beef steers. The object of the Hereford breeder has been to produce a steer that should excel. The trade that has now opened with England for beef, with the new grazing ranges of the West that have lately been opened, have perfected the Hereford's opportunity in this country.

First.—They are highly prized in the English markets.

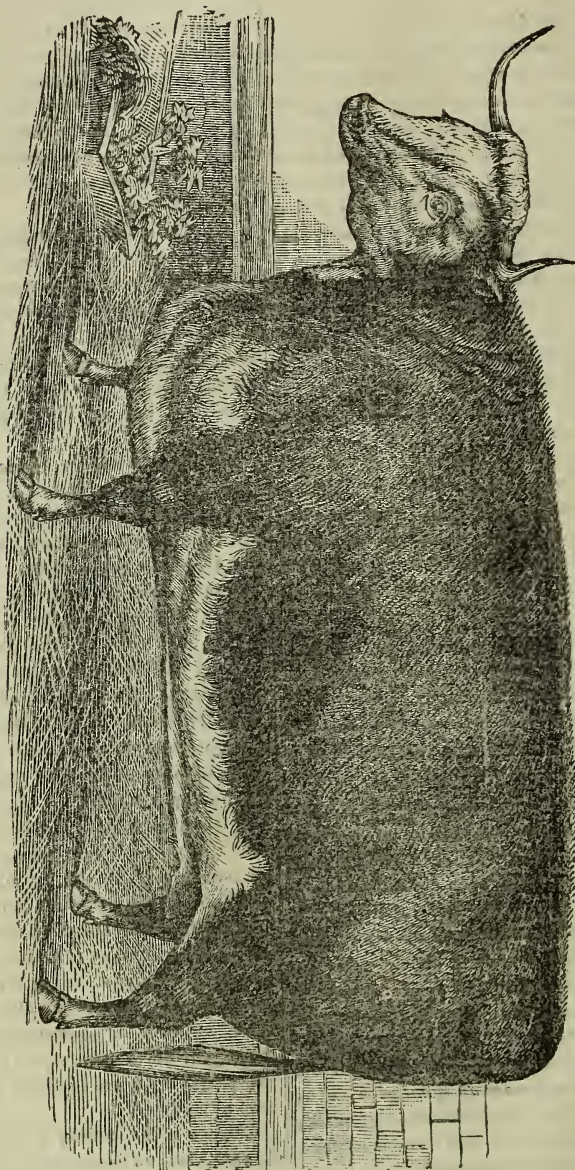
Secondly.—They are especially adapted to the grazing of the vast plains of the West, being the best grazing cattle in the world. For several years Mr. Church, near Denver, Col., has bred and shipped Hereford grade steers. One lot of steers was sold in Buffalo, N. Y., in the fall of 1874, at 7c live weight, weighing 1,250 lbs. at 3 years old, and never having been fed. At the time these steers were sold the best stall-fed steers were worth 7c to 7½c in Chicago. Mr. Church and others have shipped grade Herefords from Colorado, and they have brought from 1c to 1½c per lb. more than other steers of the same age, and weighed from 100 to 150 lbs more, per carcass. The 3-year old grade Hereford from the plains will make, on a fair range, over 1,250 lbs. The 4-year-olds will, under same circumstances, average, 1,500, and will be on the Chicago market what are termed choice beeves,

Thirdly.—The Hereford, as an improver of the native stock as found in Colorado and Texas, excels all other breeds in stamping his own character upon his produce—producing a close, compact, smooth steer, uniform in appearance, perfecting most thoroughly on the range, and carrying his meat to the market with less loss, and in better condition, than any other.

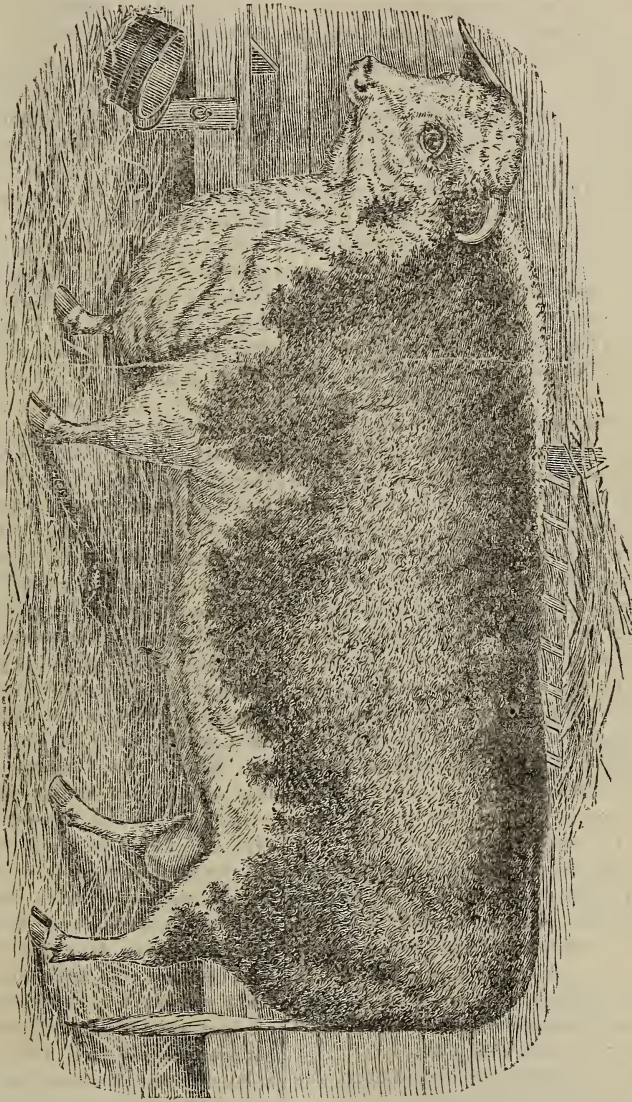
Chicago is the leading market for beef.

In 1875, there were received at Chicago 48,524 head
 " 1876, " " " " 1,098,206 "
 with a range of prices from 2½ to 7c. The Texas and Colorado cattle comprise about one-third of the receipts; ranging in price from 2½c to 4c—the larger portion from 2½c to 3c—and average weight

THE PRIZE HEREFORD OX.



THE GREAT HEREFORD BULL,—SIR BENJAMIN.



rather under than over 1,000 lbs. making the average price under thirty dollars (\$30). Estimating the number at 300,000, at \$30, is \$9,000,000. If the average weights may be raised to 1,250 lbs, and the average price to $3\frac{1}{2}c$ to $4\frac{1}{2}c$, the value of 300,000 steers would be fifteen million dollars (\$15,000,000) a gain of six million (\$6,000,000), or over 66 per cent. Hereford grade steers were sold the last season, at the Union Stock Yards, Chicago, from the range, at $4\frac{1}{2}c$.

The Hereford as a grazer is admitted to stand in the front rank of beef cattle; it is admitted that he is hardy and of fine quality. One of the large demands at Chicago is for what is termed 'stockers'—cattle to be fed at the distilleries and by the farmer. They meet this want. In Herefordshire, Eng., the home of the Herefords, very few of the cattle are fed—Herefordshire being more of a breeding than a feeding country. Mr. Duckham says, there is no finer sight for the admirer of cattle than the annual October fair at Hereford, which takes place on the third Wednesday and preceding day of that month, where several thousand steers pass from their breeders to the graziers. Their present uniform appearance cannot fail to impress those who visit that fair for the first time with a degree of surprise and admiration, in their walk through the streets of the city, to see line after line of them, all displaying a similarity of character, and at once claiming each other as of one family. Mr. Allen, publisher of the American Short-horn Herd book and of Allen's "American Cattle," says of the Herefords: As a beef animal he is superior; they feed kindly, are thrifty in growth, and mature early. He says, we might show recorded tables of their trials in England with the Short-horns, and the relative profits of their feeding for market, in which the Herefords gained an advantage, on the score of economy. He says of the Short-horns:

There is a question, however, with him who breeds or grazes the Short-horn that must be considered, notwithstanding his aptitude for early maturity. They must have abundant feed and good pasturage. Broken lands, with short grasses, does not so well suit them. We have immense tracts of lean and hungry soils, with scanty herbage, where we would not recommend the Short-horn to go.

The weights in England of Hereford steers may be stated at about the following:

For steers under 2 yrs. 6 mo.,	from 1,500 to 1,800 lbs.
" " 3 " 3 " "	1,800 " 2,200 "
" over 3 " 3 " " "	2,300 " 2,800 "

The Hereford, then, stands unrivaled as a grazing and feeding steer; and, when generally adopted into the herds of Texas, Colorado, New Mexico,

Wyoming and Montana, the plains will raise and ship steers that will fill the entire demand of the Eastern markets.

T. L. MILLER

We give also a letter of Dr. Willson, of Michigan, showing the high estimation the Western stock men, place upon Herefords.

FLINT, Michigan, June 1, 1877,

MR. MILLER—*My Dear Sir:*—Yours making inquiry about sale of Hereford grade steers, to Mr. Kline of this place, is at hand. In answer, I may say that the steers were of a class similar in every respect to others we have been raising on, and selling from our farm for the last eight or ten years. When we first commenced producing meat, or, rather steers for the shambles, we started with three full-blood sires, one each, of the following breeds: Devon, Short-horn (or Durham), and Hereford. We bought annually from the farmers in this and adjoining counties, sixty heifers, twenty of which went to each of the bulls. By experimenting in this way upon native cattle, we found that for the production of, the greatest amount of flesh in the shortest time, on the least amount of feed, the Hereford grades were the best. The steers you allude to were three years old. The first summer they were allowed to run in the pasture, with their mothers (as do all our calves), and suck *ad libitum*. In winter, until the last, they were fed hay, under open sheds, and in summer ran in pasture. Last November they were put in stalls, and for eight weeks were fed bagas and meal, one bushel of the former and two quarts of the latter to each animal daily, without water, but with all the hay they could eat. Some time in January our roots gave out, and then we increased the meal (always fed dry) to four quarts daily, two in the morning and two in the evening. I have not now their average weight, but it ranged from 1,500 to 1,876 pounds. They dressed over 60 lbs. to the cwt., live weight, and one (the heaviest) is said by Mr. Kline to have dressed 69 lbs to the cwt. Whether there could have been any mistake in this I know not; but Mr. Kline will vouch for the statement. The price I received was 5 cents per lb, live weight—too little but even that will pay. I have just sold him another lot, of seventeen steers and four heifers, at the same price—5 cents—that ran under sheds during winter. These will not average as much as the others, but will croud 1,400 lbs. each.

I bought, and will have delivered to me to-morrow, native steers of same age for feeders (twenty five head), in good flesh for $3\frac{1}{2}$ cents per lb. This shows the advantage, even in our home market, of

graded over native stock. As I said at the beginning of this letter, these steers are no exception to others we have been selling for years. Our steers without extra care, fed in open sheds, hay only, will at three years old, generally run from 1,200 to 1,500 lbs. in the month of June.

I never sold our best steers for home consumption until the last two years, but Mr. Kline buys very largely of us at present. I have sold about four thousand dollar's worth, to him during last fall and winter and this spring; and he prefers the Herefords to any cattle he can buy, and says they pay him better, even at 1 cent per lb. higher price, as they dress out so much better than native cattle.

I had hoped to get down to your herd this summer, but fear I shall be disappointed, as I cannot get away next week (the time expected) to visit Chicago and attend the meeting of the U. S. Medical Association. I hope sometime to have that pleasure. Yours, etc.,

JAMES C. WILLSON.

AGRICULTURAL REFORM.—We commend the following to the reflection of our farmers, and hope they may profit by the hints given.

"Mr. Mechi, the eminent English agriculturist, says in a recent number of the *Agricultural Gazette*: British agriculture must be reformed by land owners and tenants in the following practices, if the questions of profit and economy are considered: 1. The undrained land must be drained, if not naturally, sub-drained. 2. Fields must be of ample size and proper form, with a minimum of fences and trees. 3. The depth of cultivation must be greatly increased by subsoil plowing—keeping the surface soil on the surface. 4. The open farmyard and dung heap must be abolished by the use of covered, enclosed, and paved cattle yards properly ventilated. 5. Cattle must not be in the fields, except cows for a certain period. 6. Breeding and other sheep must be folded within iron hurdles on wheels, the fold moved morning and evening. 7. Farm horses not to be in the fields, but in properly ventilated boxes or stables. 8. All animals must have free access to water, especially sheep. 9. All green food should be passed through the chaff-cutter, roots pulped, hay and straw cut fine. corn ground, for cattle, horses and sheep. 10. The roaming at large is a great loss and bar to profit. Although Mr. Mechi is called a wild theorist, every one of these questions greatly affect farm profit, as he has proved by thirty years' practice; and it amuses and pleases me to find at last that farmers are lecturing about and

recommending covered and enclosed yards. To our Irish and Scotch friends I would say, 'Give up broadcasting and thick sowing and take to the drill and horse hoe, if you mean to keep down weeds and greatly increase profit.'"

MARYLAND AGRICULTURAL COLLEGE:—At the regular meeting of trustees of the Maryland Agricultural College, on 5th December, there were present, on the part of the State, Mr. Newell and on the part of the stockholders, Major Lee, Mr. Whitman, Mr. John Merryman and Mr. Allen Dodge. Prof. Newell was called to the chair. President Parker's report was read and accepted. Fifty-eight students have thus far registered, fifty of whom are practically engaged in agriculture. Regular lectures upon agriculture have been instituted. Prof. Warfield has been aiding the professor of agriculture and the superintendent in a course of lectures. Several students are paying board by working upon the farm. The roads upon the farm have been greatly improved; the Rossburg house has been put in thorough repair for the family of the superintendent; two new houses, one for the gardener and the other for the foreman of the farm; have been built; a mower, drill, horse-rake and complete set of new harness have been purchased, much draining and ditching have been done; a young orchard of quinces, apples and peaches has been planted out, and the stock has been increased.

A full report from the professor of agriculture shows a gradual increase of crops. Gen. Hardcastle, on account of his election to the Legislature, resigned his position as trustee, and Mr. Carroll Goldsborough of the same county was appointed in his place.

A SEASONABLE REMEDY:—Now that the chilly night air and raw atmosphere prevail to a considerable extent rendering little folks liable to take severe colds and frequently to sudden attacks of the much dreaded croup, the following remedy may be of incalculable service:

"Croup can be cured in one minute and the remedy is simple alum and sugar. The way to accomplish the deed is to take a knife or grate and shave off in small particles about a teaspoonful of alum; then mix it with twice that quantity of sugar, to make palatable, and administer as quickly as possible. A most instantaneous relief will follow. —*Marlboro' Gazette*.

The *Maine Farmer* says that Mr. C. M. Haly, of Prospect, that State, has an imported Ayrshire cow nine years old which has given forty-one quarts of strained milk per day and made twenty-one pounds of butter in one week. She is fed on ordinary food, and is certainly an exceptional animal.

COMPLIMENTARY.—An old subscriber in Virginia enclosing his subscription says: "I regard the Maryland Farmer as of the greatest service to any one who cultivates even a *garden patch*, and worth many times over in a year, the small sum at which it is supplied."

NOTICE.

We have during the month past, sent out our bills to all who are in arrears to the Maryland Farmer to January 1st 1878, and respectfully request them to remit us the amount of their respective accounts by an early mail. We have opened a new set of subscription books for 1878. We dislike to trouble our friends with gentle reminders, but they will admit we cannot publish a first-class Magazine except at a great loss, unless our subscribers assist us to do so, by prompt payments,

We have no doubt but that all our friends will promptly answer our requests and renew for 1878, and we shall endeavor to make this *old stand-by*, the Maryland Farmer, better than ever it has been. Under the new management, with prompt paying subscribers, new energy and life will be infused, and a largely increased list of subscribers and advertisers will be the consequence.

We hope our subscribers will not suppose, because the bills sent out are in some instances of small amount that delay in remittance will not inconvenience the publisher.

The monthly expenses of the MARYLAND FARMER are very large, and must be met by the aggregate of such small sums as are due by individuals.

TO SUBSCRIBERS IN ARREARS.—We find the following in that excellent weekly, the *Marlborough Gazette*, edited by our talented and witty friend, *I. S. Wilson, Esq.*, who is truly "a chip of the old block,"—the late Geo. W. Wilson; and, as it meets our views just at this pressing time, we insert it, for the benefit of all whom the cap may fit:

To those of our subscribers who are in arrears to us, we would gently remind them, that there is no time like the present to settle old scores. In fine, although we wish all our subscribers the rich blessing of health, nevertheless we would be pleased to have some of them seized with a *remittent fever*."

CORRESPONDENCE:—A subscriber Mr. A. H. C., of Queen Anne's County, Md., wishes to know how he can obtain the last report of the Agricultural Department of the U. S.; also wants some of the Tisnania wheat, and suggests that advertisers should state prices of goods and article they offer as it would save trouble to those who cannot easily make the enquiries necessary. We reply, 1st write to your representative in Congress, or to one of the Senators from Md.

2nd, Wheat sent.

3rd, We think your suggestion a good one. We shall be glad to receive your promised communications, as we are always pleased to receive letters from farmers germane to multifarious matters of their avocation.—[Eds. Maryland Farmer.

WIRE GRASS OR BLUE GLASS, (*poa compressa*).—

This is not to be confounded with the celebrated grazing grass, known as Kentucky Blue Grass, (*poa pratensis*). But although the wire-grass is considered a pest in Maryland and other sections of the Union, it a valuable grass on the light sandy soils of the South, under the hot sun and arid atmosphere of that clime. *Flint*, a well established authority on grasses, says, after describing it, this blue grass is very common on dry, sandy thin soils shoo's its leaves early, but the amount of its foliage is not large; otherwise it would be one of our most valuable grasses, since it possesses a large per cent. of nutritive matter. Flowers in July. Most grazing animals eat it greedily; cows feeding on it produce a very rich milk and fine flavored butter, and it is especially relished by sheep.

We write this in reply to an "old subscriber," who says it is a pest in his peach orchard and thinks injures his trees, and wants to know how to kill it. In reply we say, as it is so tenacious of life rooting like the sweet potato at every joint of the stem, that we know of no way to get rid of it, but, by constant working the ground and raking out the roots which can be put on barren places where other grasses will not grow, and which will become good pasture for his sheep and cows, and thus be profitable by growing a rich grass "where none grew before." The frequent hoeing of the ground to kill this "pest" will be of benefit to his trees.

THANKS.—We received from Mr. J. Hawkins, of Virginia, a demijohn of really excellent wine, we cannot tell if it be Catawba or Ives seedling.

This was a very acceptable present and an enjoyable one, as a Christmas remembrancer. Why do not all our friends who own even a few acres of ground, "do likewise"—not, we mean, send us a quantity of their vintage, but grow grapes and make their own wine, when it can be done with so little expense and labor, and be so much healthier as a beverage, than are distilled liquors, now too often used by our people.

It is certain that if wine and cider be used instead of whiskey, as our national drink, we would become a more temperate people. Home-made, undistilled drinks are the best and surest remedies against intemperance. Any one who has traveled abroad, will testify that in all wine producing countries there is more temperance among all classes, than in countries where strong drinks are the fashion. When we visited Europe, we never saw a Frenchman drunk, or any man who was a resident of a nationality which made the juice of the grape its popular drink and looked to wine as one of its chief resources of trade.

The Tramp Question.

This question has become so important of late that a State Convention was called, by a committee of the Maryland Prisoners' Aid Society, to consider the subjects of the suppression of tramps and vagrants, the jails, almshouses, etc., assembled in Baltimore lately, and was well attended by a large number of the progressive men of Maryland.

All the members seemed to be unanimous, that the "tramp" was a great annoying nuisance, but were divided on the question as to *what* was to be done with these nuisances. It cannot be denied that this subject involves many gravely important questions as to constitutional rights, inherent rights, rights affecting the community, and indirectly touches some of the highest principles of civil organization. We regret that the press of other matter this month, preclude our expression of the views which strike us, which we shall defer to our next number in February. We have only room to say that we think there is only one remedy, and that is the New England system of dividing the State into townships, and each township to have a town-farm, and take care of its own tramps, roads, schools, etc. This view of the question we desire to discuss in the February number of the MARYLAND FARMER, in connection also with other subjects, we deem important for legislation to promote the best interest of the whole people of the State, such subjects as inspections, roads, dog laws, etc.

OUR VISITORS.—During the past month we were called on by Genl. Horace Capron, former Commissioner of the Agricultural Department of the United States, and later the holder of a similar office for some years under the government of Japan, where he was instrumental in introducing American machinery, domestic stock, trees and seeds. He built the first railroad in that great country, and organized the American cavalry tactics, beside many other important features of American progress.

Our interview was very pleasant, and gave to us many new ideas of what can be done by international association, for the progressive advance of the civilization and the material wealth of nations heretofore strangers to each other. We hope that the General will, before long, favor us with some of his reminiscences of Japan.


During the meeting of the *Grangers* in this city, last month—which by the bye—was an important one, and the fruits of their labors and consultations will likely be of great benefit to the agricultural interest in the legislation, of the present

session of the Maryland Legislature—several distinguished members of the Order called on us and gave us their views. They seemed united as to the great want of good laws, respecting roads, inspections, tramps, transportation, salaries of public officers, dogs, &c. In regard to the latter, an old fox-hunter, excellent farmer and genial friend, of Montgomery county, (George Brooke, Esq.) remarked, that he was willing to pay a tax on every dog in his pack, if sluts were taxed high. Every man should be allowed to keep one dog free of tax; but a high tax should be put on every bitch, which would prevent the increase of so great a number of worthless dogs. He thought this would elevate the race and character of all kinds of dogs. Dogs and men were somewhat alike—a well bred dog of whatever breed would behave himself. Those who could claim no parentage, waifs, and had lived without proper training in their youth, would likely prove outlaws, even in time, become as low in the scale of dog-kind as egg-suckers and sheep-stealers. We agree fully with our venerable friend of three score and over, who yet can ride after his famous pack over ditch and fence, hill and through forest as well as any practical steeple chase rider on trained horses, over smooth turf and hedges that fall at the touch.

THE AGE OF TREES.—The longevity of various trees has been stated to be in round numbers, as follows:

Deciduous Cypress, 6,000 years; baobab tree of Senegal, 5000; dragon's blood tree 4,000 years; yew, 3,000; cedar of Lebanon, 3,000; olive, 2,500; oak, 1,600; orange, 1,560; Oriental plane, 1,200; cabbage palm, 700; lime, 600; ivy, 600; ash, 400; cocoanut palm, 300; date palm, 300; larch, 300; pear, 300; apple, 200 years. The Brazil vine palm arrives at the age of 150 years; the Scotch fir gets its growth in about 100 years, and the balm of Gilead in about 50 years.

BIG HOGS.—Mr. M. H. Crouse, of the Farmer's Hotel Upper Marlboro', Prince George's Co. Md. slaughtered lately, six hogs, which weighed respectively 444½, 409, 400, 381, 357½ and 324 pounds making in all 2,316 pounds. These hogs were all of one litter, and were eighteen months old.—*Martinsborough Gazette*.

 We solicit correspondence from all practical bee keepers, poultry raisers, dairy farmers graziers, and stock-breeders, upon all subjects appertaining to their respective specialties. Give us light. Let your brother farmers have your methods and experiences. We wish to make our columns the medium of interchange of views and experimental results, between farmers for their mutual benefit and gratification.

HORTICULTURAL.

Freack of a Pear Tree's Stump.

The Troy Budget says: "Mr. E. G. Akin residing on North Second Street, determined last March to cut down an old pear tree, over a foot in diameter, that had stood near the rear of his house about a quarter of a century. The tree had outlived its usefulness as a fruit-bearer and its shade had become too heavy in the wrong place. At the solicitation of his wife, who saw an opportunity to combine the useful with the ornamental, he cut the tree off some fifteen feet above the ground, that it might serve to support clothes lines, while on the top of its stump a box of hanging plants could be arranged. Happening to be house planting at the time, Mr. Aiken gave the top of the stump two coats of paint. To the surprise of the family within a few weeks thereafter; numerous green vines were observed starting about the top of the stump. These rapidly grew, drooping as they gained size, until now the whole body of the former tree is almost hidden from sight by a thick mass of pendant limbs and leaves. Mrs. Akin's hanging basket has been beautifully furnished by nature itself—far more artistically than the utmost care could have accomplished. The tree is visited by many people, and may be seen from the street. It gives evidence of bearing fruit another season."

KILLING CANADA THISTLES.—I had on my farm a four acre field covered with Canada thistles. I say "had," because I am convinced that the present season's treatment has made it too hot for them and I shall see no more of them. The land was strong—"it takes good land to raise good thistles." One-half the field was seeded, immediately after plowing and a thorough working with a two-horse cultivator, with soiling corn. This was put in drills, 30 inches apart, with a large one horse drill—about 3½ bushels per acre. By the frequent use of the cultivator, the space between the rows was kept clean, and directly in the row, the few that have stuck up their heads, look very yellow and sickly, being shaded by the dense growth of the corn. The remainder of the field was seeded heavily with Hungarian grass. Timely showers have made the season favorable to this crop, and it has grown rapidly, smothering the disagreeable former occupants of the soil. I do not consider this so successful a mode of treatment as the former, because Hungarian grows so slowly on the start, and the thistles had an opportunity to gain a foothold. The crop is nearly ready to harvest. Here and there, in looking over the field, a thistle is seen, but a stranger would never mistrust how foul the field was seventy days ago. At any rate, what few there are will be out before they mature seed.—P. Litchfield Co., Ct.

Keeping Grapes.

W. A. R. in the *Journal of Horticulture* gives the following method of Keeping Grapes.—I will give a method of keeping grapes in winter, that has proved highly successful with those who adopt it. Cut the fruit, when fully ripe, on a dry day, spread it out thinly on shelves or tables, in a cool dry room for a few days two to six, according to the weather, the object being to dry up the stems a little. Cut clean rye-straw in a straw cutter, about an inch long and cover liberally the bottom of a suitable tight-jointed box or other vessel; on which place a layer of fruit, not too deeply; then cover with straw liberally, and lay fruit on it again; and so proceed with the packing of straw and fruit alternately. This done they require only a cool place, with a little moisture as practical, to insure sound fruit until the approach of spring. A sprinkling of flower of sulphur increases the safety of the grapes, but the absorbing property of dry straw is mainly and ordinarily sufficient.

KEEPING WINTER PEARS.—At the winter meeting of the Ohio State Horticultural Society, at Zanesville, Mr. Bateham explained Dr. Ayer's successful method of keeping winter pears out of doors during the winter. This is simply to gather the fruit when mature, or before sharp frosts occur, and lay them in piles of one or two bushels each, not over six inches in depth, upon smooth grass near the house, and under the shelter of a tree, an evergreen preferred, then cover with forest leaves five or six inches thick, and throw some sticks or brush on top to prevent the leaves from blowing away and keep small animals off. Leave it thus till hard freezing weather sets in; then take off the brush or sticks and cover the fruit and leaves with old coffee sacks or capes, the better to exclude light and air but not to exclude wet nor frost, indeed the more freezing the better. As the fruit is wanted for use bring some into the house, and if frozen, let it thaw in a dark cellar, kept closely covered up, and then keep a few days in a warm room till mellow.

COVERING FLOWER BEDS, which half tender bulbs and shrubs, such as the hyacinths and roses, is very easily and neatly effected with evergreen branches. Let them be cut nearly equal in length, and begin at the outside, and place them up outward in a neat circle if the bed is round, and on these lay the next circle, and so on till the bed is covered. They will thus become a real ornament instead of defacing the grounds as when straw or cow manure is employed. This covering should not be applied till freezing weather,

For the Maryland Farmer.

POTOMAC FRUIT GROWERS.

This Association held its regular monthly meeting in the Board of Trade Rooms, Tuesday Dec. 4th. C. Gillingham, President, in the chair; and Dr. J. E. Snodgrass, secretary; a full attendance including a goodly number of ladies, were present, and a profitable discussion was had on the question of grapes and their diseases.

Dr. J. Brainerd led off with a highly instructive paper on that subject, giving a detailed account of grape growing and the recent diseases of that useful fruit. A lengthy discussion followed, in which Col. D. S. Curtiss, Dr. McKim, the Secretary, Benj. Barton, Col. Hiram Pitts, the President, Gen. Bingham, J. S. Brown, Dr. Gross, J. H. Smith and others took part, by all of whom it was pretty well settled, that much of the diseases and failures of grapes and other fruits, are caused by the want of proper fertilization and suitable soils, lime and phosphatic matters being an essential in the soils; while it was also shown that over-bearing and lack of sufficient pruning-back, were also causes of failure and disease in vines, trees and fruits.

The subject of the usual winter festival and picnic was spoken of and decided to be settled at the next meeting.

The sample table was not as well supplied with fruits, as is usually the case.

Adjourned to the second Tuesday in January, 1878.

D. S. C.

TO KEEP SWEET POTATOES.—I have found the following plan to be successful in Nebraska, says a correspondent of the *Prarie Farmer*. First dig your potatoes, and let them lie in the sun until they are dry. Second, have ready a pit sufficiently large to hold what potatoes you wish to keep over. Put in the bottom of the pit six inches of straw, and put in your potatoes the same as you would pit Irish potatoes, and cover them lightly with straw and let them stay three or four days, until they go through the "sweat," then put on more straw and a light covering of dirt. As the weather gets colder put on more cover, enough to keep them warm. I have kept my potatoes in that way for a number of years, and never failed. The potatoes should not be allowed to touch the earth. Keep straw and chaff tuckered around the sides of the pit.

ASHES FOR POULTRY.—When feeding our hens the past winter, we have practiced mixing a small handful of wood ashes with the meal, and found an apparent benefit to the fowls. We also give in the meal, twice a week, about one tea-spoonful of Cayenne pepper. Our stock numbers thirty birds.

—*Horticulturist*.

For the Maryland Farmer.

Woodlawn Farmers' Club—Virginia.

DECEMBER MEETING.

This substantial old society held its monthly meeting at the residence of Walter Walton, Fairfax county, Va., on December 4, 1877, and was very fully attended; Chalkley Gillingham, Pres't, in the chair, and Hon. N. W. Pierson, Secretary.

One important item of the proceedings was passing a resolution by the Society that they would take action and sustain the expense of testing the "Stock Law," which is being constantly violated—their determination being based on the case of Felix Quander (a colored man living near Accotink)—who has persistently defied his neighbors and the community at large, by allowing his cattle to run at large for several years, contrary to law.

The critical committee made a handsome report on the stock and farm of Mr. Walton:

"We find our host to be a great advocate of top dressing. We observed in crossing his last year's wheat field a line, one side of which was fertilized by applying 300 lbs. of Peruvian guano with 600 lbs. ground bone, costing about \$20 per acre, while the other had nothing at the time of sowing, but was top-dressed afterwards with stable manure at an expense of about \$30 per acre. In the wheat our host says there was no apparent difference, but in the grass we find a considerable difference in favor of top-dressing. On another field which has been in grass for several years we see a marked difference. Where the manure was ploughed in we find nothing but daisies, and where the manure was applied on the surface a stiff grass sod."

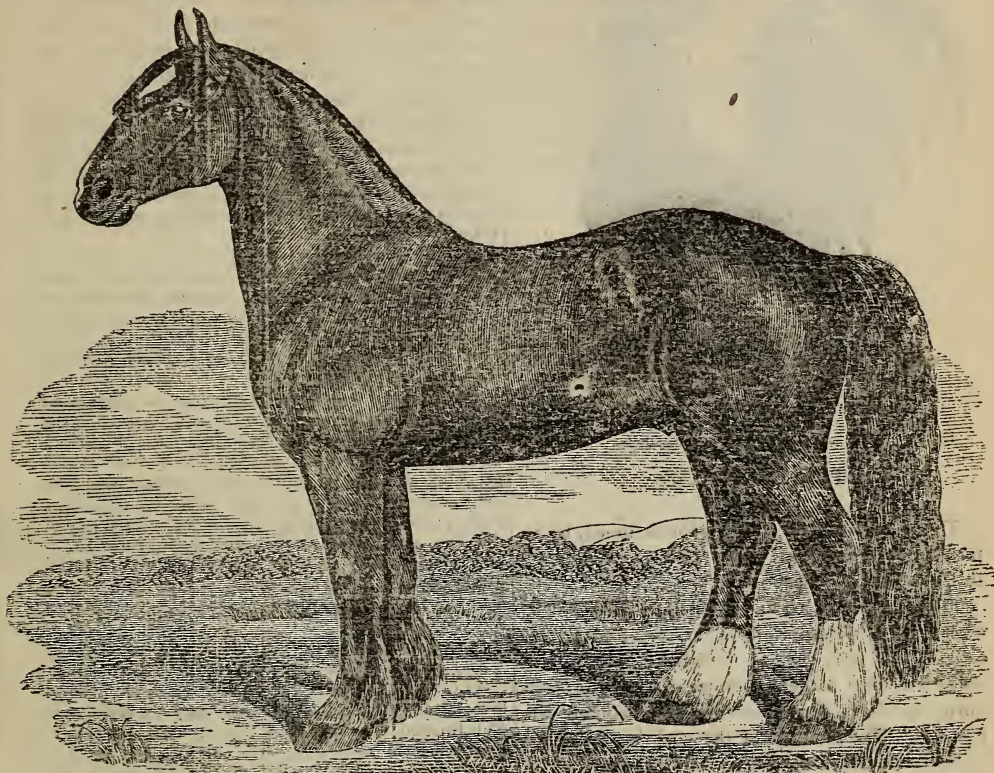
Another interesting part of this report is worth general observance, which is as follows:

"In his barn is an abundant supply of provender for his horses, cattle and sheep. His buildings and fences are in good condition, his implements all housed, and last, but not least, we saw a pile of seasoned wood, cut and housed, ready for the stove, which shows a kindly consideration for his wife's comfort."

After partaking of a sumptuous dinner, the club adjourned to meet at the residence of Chas. Balingers, January 12, 1878.

Subscribe to the MARYLAND FARMER, and save money thereby. It is worth to every man who takes it, and reads it, and follows the suggestions it monthly contains, three times over, the price of Subscription. Price \$1.50 per annum.

CLYDESDALE HORSES.



KING OF THE EAST, (pure Clydesdale),

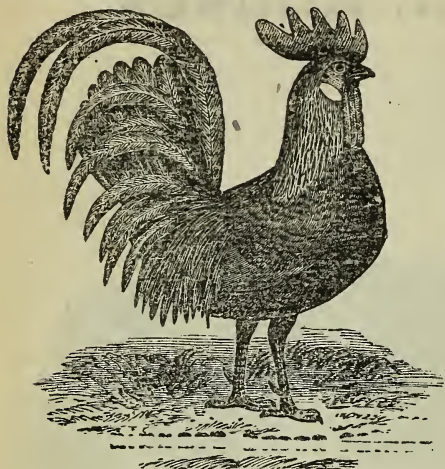
Owned by Messrs. SMITH & POWELL, Syracuse. N. Y.

The above fine electrotype seems to be an excellent illustration of the type of the famous breed of Clydesdale horses. The valley of the river Clyde, in Scotland, is no less remarkable for its peculiar breed of strong cart-horses, than is the river itself for its historic and legendary lore while its banks are made the scene of Walter Scott's famous novel "Old Mortality."

KING OF THE EAST, was selected in Scotland as a superior representative of the famous Clydesdale breed of that country, being from noted prize stock of the present strains. He was imported in 1875, and is now four years old, dark bay, $16\frac{3}{4}$ hands high, and weighs 1800 lbs. We are desirous to encourage the introduction of European draft horses in this country, and have long thought for general farm purposes, the Clydesdales were among the best, if not *the best*. They supply, we think, a necessity long felt. They are kind, gentle and free workers, rapid walkers, good roadsters, the best of heavy draft horses, and seem to work almost from instinct. They are easily kept, naturally round bellied, fleshy and smooth, good constitutions, mature early, as at 3 years old, are able to do almost any sort of work. A first-class breed for horses of all-work is produced by a cross of the Clydesdale stallion and a good common blood American mare. The obtaining of such a cross, is one of the essential advantages the American breeder of prime all-work farm horses derives from such importation.

Messrs. Smith & Powell are largely interested in breeding both Clydesdale and Hambletonian horses of the most approved families, and have on their farm at this time about 130 choice animals, including to brood mares and several fine stallions. They are also largely interested in importing and breeding Holstein Cattle.

The Poultry House.



THE LEGHORNS.

This is what is said of this popular breed, by an intelligent breeder of fowls, (Mr. A. Zennack,) in *Our Home Journal*.

"The Leghorns, now, are medium sized fowls, with large combs, (upright in the cock and falling over in the hen, just as in Spanish fowls,) pure white ear-lobes, rather a prominent feature in Leghorns, red faces, white plumage, and brilliant yellow legs. The plumage of the cock is pure white throughout, the neck, hackle and saddle, may be tinged with gold or straw color; the plumage in hen must be pure white, free from the slightest yellow tinge; these are about the general characteristics of White Leghorns."

"The Brown Leghorns are of the same family, differ only in color, both cock and hen being of a rich brown. They are said to be larger, but I fail to see any difference in this respect; except that the cock of Brown Leghorns, has a larger tail; certainly White Leghorns breed more truly, than the Brown."

"The Leghorn fowl is a non-setting fowl, and I always give their eggs to a common dung hill to hatch; but a neater and more pleasing style of bird cannot possibly be found, and as layers I consider this breed the best I have ever met with. The hen lays an egg nearly as large as that of a Spanish fowl, and pullets begin to lay at five months, and long before any of our Brahmas have begun to think about it, and cocks begin to crow at 10 weeks old. The Leghorns are great foragers and comparatively small eaters; they are certainly the best fowl for the South, and I have come to this conclusion after having bred and fully tested five different varieties of fowls."

"I know by experiment, that for laying, no variety equals the Leghorns, and if comfortably housed and properly cared for and fed they will lay all through the coldest weather; the hens have powerful machines for converting food into eggs, they consume and in their turn they 'shell out.'"

"As regards the prices of Leghorns they can be purchased for \$5 a piece and the eggs from \$2 50 to \$3 00 a dozen. Although they may be procured for a less sum than this, I look upon too great an economy in the purchase of breeding stock, whether of fowls or anything else, as a great mistake."

THE LANGSHAN FOWLS.—Lately imported from Langshan, a north-easterly interior province in China, by Mr. Samuels, Waltham, Mass. will likely prove a valuable acquisition to the breeders of poultry in America. "L.F." in *The Poultry World*, thus speaks of them:

"The three fowls in Mr. Samuels' possession show very clear peculiarities not common to the known varieties of Asiatics; they are all distinct black in color, without any tinge save that of the greenish-metallic luster of their plumage, which is exhibited in both cock and hens, in a marked degree; the light purplish tint of the skin between the toes, upon all three, is peculiar; they are Light Brahma shaped, and not squarely built like the Cochins; and in size and weight they equal, for age, the largest average Cochin I am acquainted with."

"On the whole, I may say for the information of *The Poultry World* readers, that these representatives of the "Langshan" race are fine birds. They are characteristic in themselves, they are large and well formed, they are good layers, and their eggs, thus far, have proved fertile. Mr. S. has neither chicks nor eggs for sale, this season, but, no doubt, another year—for he is a skillful, reputable, and enthusiastic breeder—he will be able to give us a very satisfactory account of his experience with the Langshan' birds."

Dried Eggs.

A large establishment has been opened in St. Louis for drying eggs. It is in full operation, and hundreds of thousands of dozens are going into its insatiable maw. The eggs are carefully "canned" by hand—that is examined by light to ascertain whether good or not—and are then thrown into an immense receptacle, where they are broken, and by a centrifugal operation the white and yolk are separated from the shell, very much as liquid honey is separated from the comb. The liquid is then dried by heat, by patent process, and the dried article is left, resembling sugar; and is put in barrels and is ready for transportation anywhere. This dried article has been taken twice across the equator in ships, and then made into omelet, and compared with omelet made from fresh eggs in the same manner, and the best judges could not detect the difference between the two. Is this not an age of wonder? Milk made solid, cider made solid, apple butter made into bricks. What next?—*The Age of Steam*.

THE DAIRY.

The Escutcheon in Cows.

Every once in a while some genius discovers that there is no value in the escutcheon marks of cattle, and soon again another genius appears who claim that if you can get a good escutcheon, you hardly need any other part to the cow. After a few weeks bandying of epithets the two parties subside, and another question occupies the public attention. Now, for our part we believe in the value of an escutcheon mark as one indication of milking quality. When we see it on an ox, we do not seek for milk. When we see it on a beef type of short horn cow, we do not expect that it indicates a milker in her case. When we see it on a cow with every other indication of milking quality defective, we do not allow the escutcheon mark to convince us against our judgment. The escutcheon mark is but one aid to us in forming a judgment of the milking quality of a cow, but an important point if, rightly interpreted.

Our own observations appear to give confirmation to the following rules:

An escutcheon mark means milk on a dairy breed, but not necessarily on a beef breed of cattle.

The size of the escutcheon has a relative and not an absolute significance. Therefore the size as between cows of different breeds is of little account, but only as between cows of the same breed,

The escutcheon mark assumes the most prominence as a guide, when the other marks of a good milker are present.

We have seen good cows without good escutcheon marks, but we have never known a poor milker in a dairy breed, where many other marks of milking quality are present, to have a good escutcheon. Indeed, as a matter of observation, the best herds of milch-cows always, in our experience, show the best average escutcheon marks.

The above practical article from that capital journal, the Scientific Farmer of Boston is strongly corroborative of our correspondent, Dr. Sharp's view in the December number of the Maryland Farmer. It is strange that the Guenon theory should be doubted after so many remarkable tests that have proven it to be the best *guide*, when other marks of a good milker are present, but which fail unless the escutcheon is distinct.

To judge a cow for butter her hide should be thin, soft and mellow, and under the hair of a deep yellow color; her udder should be soft and yellow skinned, well covered with zigzag veins, large and broad; her tail at the end rich yellow; the side of her ears and around the eyelids yellow.

SOMETHING ABOUT CHEESE;—Some cheeses are required to be of peculiar richness, and when this is the case an additional quantity of cream is added to suit the taste. There is considerable waste in the process of making very rich cream cheeses, but the price is so much larger than that obtained for the inferior varieties, that ample compensation is received.

The richest and most esteemed cheeses of this kind are known as Stilton, Cottenham and Southham. The process in making these cheeses, is to add the cream of one evening's milk to the new milk of the next morning—after which the rennet is put in, and the coagulation begins. The first named of the above cheeses, is prepared with more care than any of the others. As soon as the curd is formed, it is lifted gently out and is placed upon a sieve. The whey being strained off, the curd is pressed lightly with the hand until it is firm and dry, and is then placed in a mould. After this it is set upon a dry board, and bound round with linen clothes, which are tightened as it becomes necessary. The ends and sides of the cheese are carefully brushed when the cloths are removed—and not until two or three months of careful handling, is the process completed.

Skim-milk cheeses are made in various ways and are of various qualities. They are, although less oily, considered equally nutritious with the richer kinds, and stand the changes of climate, especially extreme heat, better than the Stilton. Insects attack them less, and they are particularly in demand for supplying sea-going vessels. They are made much after the same manner as the full milk cheese.

Gloucester cheese—single and double—is famous in the United Kingdom. The Vale of Berkeley alone is computed to produce annually twelve hundred tons of these famous cheeses.

Cheddar cheese, so called from its being manufactured principally in the Vale of Cheddar, is prized above all others, by many connoisseurs. The Pine-apple cheese, so common in this country, is made in North Wiltshire.

Cheshire cheese is manufactured in Cheshire, and is made for export quantities than any other varieties. It is salted and steeped in brine, and is ready for use until about two years. It has a strong taste, and weighs usually one hundred pounds. The cheeses of Cheshire and Lancashire are very similar to Cheshire. Stilton cheese is produced in Lincoln, Huntington and Rutland, and is largely consumed by the west.

England and foreign countries. It is not considered ripe for use until two years old, and in a partial state of decomposition. Bon-vivants the world over, lay great store by a mouthful of old Stilton, after dinner.

In the manufacture of cheese, it is computed that about eight pints of milk will make one pound of cheese. After skimming off the cream, the milk remaining, it is stated, will produce about twenty-five per cent. less of cheese, than if the cream had been allowed to remain.

Two gallons of milk, with its cream, should make one pound of butter. If the cream is churned separately—three gallons of milk will be required to make the same amount of butter. Mr. Low estimates the amount of the milk yield of the English dairies at something like eleven hundred million gallons per annum, valued at about thirty million pounds sterling, most of which is consumed at home, in addition to large quantities of cheese and butter imported from other countries, such as Holland, France and Germany.—*St. Louis Journal of Agriculture, Nov. 1*

Mr. James Lawrence, of Groton' Mass., gives the following as the yields of some of his cows:

AYRSHIRES FIRST 12 WEEKS TOTAL FROM CALVING.

Rosellina	3,314 pounds.	35 weeks, 6,653 pounds
Flora,	3,998 "	47 " 8,977 "
Mary Gray,	4,388 "	31 " 7,632 "
Just in Time	2,760 "	45 " 7,992 "

Total for the four cows 39,354 pounds, or per cow 7,588 pounds, or 3 528 quarts,

Mary Gray averaged 21 pounds butter per week, for the first 12 weeks. It was of a color as yellow as the average Jersey.

His Guernsey herd numbers 14 cows and heifers, and two bulls. Two, Scandal and Tottle, were imported by Mr. Lawrence in June, 1877, and have just dropped heifer calves. Scandal is giving 16 quarts now, and Tottle 14 quarts. Last year his Guernsey averaged about 5,000 pounds of milk

A Mr. Scott, of Shaftsbury, Vt. had a cow whose milk during the year 1866 yielded 504 lbs. of butter.

An Ayrshire cow, after calving, yielded in nine months, or between March 10, 1868, and Jan. 10, 1869, 300½ lbs. of butter, besides supplying the family with milk and cream.

COLORING BUTTER:—So long as customers are willing to give from five to ten cents per pound more for the properly colored article it will be useless to lecture dairymen upon the impropriety of the practice of coloring butter either from hygienic or moral point of view. The article most generally used is annetto, which is the product of a Brazilian berry, and is there much used as a condiment for soups and stews; in a pure state it forms the best article for coloring, and is harmless. A churning of fifty pounds of butter does not need a piece larger than a bean, and hence even if injurious would be so much diluted as to be comparatively harmless.—*Exchange.*

Fattening Hogs.

In a few days the pen-hogs should be put up, and their fattening be pushed with the utmost vigor during the remainder of this month, as pork sold earliest generally commands the best price, while the exceptions to this, as a rule, are few and far between. The pen should be kept clean, their sleeping apartments well littered, and the eating propensities of the animals administered to in every possible way. There is a point, however, beyond which longer feeding will not pay, and when this is reached it is better to kill and sell at once. Remember that this and the next month are the most favorable of the year for laying on fat, and every advantage should be taken of it.

"Eyes have they but they see not"—Potatoes.

"Ears have they but they hear not"—Cornstalks.

"Tongues have they but they tell not"—Wagons.

"Teeth have they but they chew not"—Saws.

"Hands have they but they handle not,—Clocks.

"Feet have they but they walk not"—Stoves.

"Noses have they but they smell not"—Teapots.

"Mouths have they but they taste not"—Rivers.

Cows.—The largest yield of a single entirely recorded, is that of an heifer at Lewes, England. In years she gave an average of 1210 he was milked one year for 328 aggregate of 1,230 gallons, from butter was made. The authority in what variety or family this led to.

THE APIARY.

Bees and Honey in the South.

BY PAUL L. VIALON.

CHAPTER V.

SUITABLE LOCATION FOR AN APIARY

As the revenue of the Apiary will depend on the bee pasturage afforded by the neighborhood, such as white clover, fruit trees and wild flowers; we must, therefore, before establishing the Apiary, ascertain that the flora in our vicinity will afford a fair supply to our bees during the fine seasons.

In locating the Apiary, we must choose a dry situation, if possible, and not a great distance from our residence, for convenience of watching during the swarming season; although we guard against Natural Swarming, some attention is necessary, as I have stated before, in regard to the Queen failing sometimes to return to the hive, either by hopping too far or some other cause. If our location is subject to high winds we must try to protect our Apiary from its bad effects on the bees, either by a fence or hedges.

As bees use a great deal of water, and as it is indispensable for the success of their work, we must therefore in establishing the Apiary, if there is no natural supply of water, provide it by artificial means, by having troughs or some other receptacles where they can get it without endangering their lives.

All the hives in the Apiary must be the movable frame hive, all painted alike and only one size frames used so that they can fit in any one hive, as without this, all the advantages of this culture will not be realized. They should not stand more than 8 or 10 inches from the ground and have a movable alighting board, slanting from the entrance of the hive to the ground, to help the bees to crawl in their hives, should they happen to fall on the ground, when they come back from the field heavily laden with pollen or honey.

In making stands for our hives we should use two joists 2x6 or 8 inches, and as long as necessary, and placed just far enough apart so that the ends of the bottom boards of the hives come flush with the joists. To keep these joists in place, a cross piece is nailed at each end. The space between the joists should be filled with sawdust, if possible, to prevent grass, etc., from under and the sides of the hives. These stands should be in rows four feet apart, and a lawn mower should be used, in these

rows, at least once a week, to keep the grass short in front of the hives. The hives should be placed on these stands from 4 to 6 feet apart from the center, and in such a way that the hives of each second row should face themselves in a quincunx order.

Now, as we should have shade for our bees, the best way is to plant fruit trees among the hives, such as peach, plum, dwarf apple and pear trees, which will not only benefit them in that way, but afford them a fine supply of pollen and honey during their blooming seasons. Such an orchard gives an agreeable shade during the hot summer days, which is also convenient for the Apiarist, when working among his bees. The expense of such an outlay will be greatly repaid by the abundance of fruits, as we may rest assured that the fruits from these trees will be fine and in quantity, as it is a known fact that bees are necessary for the fecundation of plants, especially fruit trees, and therefore these fruits will be finer than those from a section of the country where there are no bees.

In my Apiary, I use peach and plum trees; having one planted between each two hives, and in every two rows in the same quincunx order as the hives, I keep them trimmed 6 feet from the ground for convenience of working without having any branches in my way.

The honey house or rather extracting room, should be built in the middle of the Apiary. Mine is made octagonal, 12 feet in diameter, with four openings made of wire cloth, which allows light and air, and prevents from being bothered by robber bees while extracting or working with honey. Some Apiarists use a tent, but I should think that it must be inconvenient, especially when the weather is warm.

CHAPTER VI:

STOCKING THE APIARY.

Whenever we wish to stock the Apiary rapidly we can do it if we possess several good colonies, by the nucleus system and giving them the proper attention; feeding them, should a scarcity of food exist, and using the artificial comb foundation to help them build up before the end of the season. As we are working by this process for a fast increase, we must not depend or expect any surplus honey for that season, and probably will have to sustain some expenses in feeding; but judiciously managed these nuclei will be good colonies for the next season.

But the best way of stocking an Apiary that I can advise, should it be impossible to purchase a good stock of bees in the old style of box hives,

would be to purchase, in the spring, some good and strong colonies of Italian bees in the movable frame hives, from a reliable apiarist. As it will give the best satisfaction; as they will pay for themselves the first season, if the season is a fair one and, probably, if managed right, we will have doubled them. Should I start an Apiary, I would certainly do it in this last way, as being the cheapest in the end—as I consider a colony of Italian bees, in the spring, in the movable frame hive, to be worth more than two colonies of black bees which have to be transferred, and this is saying the least.

But as some will desire to stock their Apiary by the purchase of bees in the old style of box hives, and transfer them in the movable frame hive, I must caution them to be particular in examining their condition.

It would be desirable when these hives are bought that they be full, heavy and well populated with bees, and the wax yellow or brown, as after transferring we may have a fair lot of honey which may pay a part of the amount disbursed. Black combs indicate an old hive, though if the following signs are observed it is no drawback.

To examine the old hive we should incline it on one side so as to take a good look in the bottom between the combs—if all the combs are well covered with bees, and by blowing a little smoke you can see capped brood and larvae—in several combs it will generally be in good condition. The following are also good signs: Whenever we see the bees out early in the morning and coming back well loaded, and this until late in the evening; when the bees are quick in their motions, and at the least knock on the hive a long roaring will be heard which is repeated several times; when the bees are in great number at the entrance of the hive and on attentive watch and quick in the defense.

We may also get a good start in hunting fugitive swarms in the spring, about the time of swarming. They are often met in fields, clustered either to bushes, trees or fence posts. I have heard of a party who gathered over twenty swarms in that way in one season.—*Our Home Journal*.

Early History of Bees.

In an address before the Michigan Bee Keepers' convention, M. J. Tomlinson quoted:

"In the song of Moses there occurs this striking sentence: 'He made him ride in the high places of the earth that he might eat the increase of his fields, and he made him suck honey out of the rock and oil out of the flinty rock.'" Also the riddle of Samson, "Out of the eater came forth meat and out of the strong came forth sweetness." Aristotle wrote about bees 330 years before Christ, and Virgil some 30 years before the Christian era, devoted a whole book to the same object. I quote a few of his polished lines:

'The gifts of Heaven my following song pursues
Aerial honey and ambrosial dews;
Their arms, their arts, their manners I disclose,
And how they war, and whence the people rose."

No modern writer with all the aids of modern discoveries has described the nature of bees more truly than has Virgil in these interesting lines:

'The bees have common cities of their own
And common sons; Beneath the one law they live.
All is the state's: the state provides for all.
Some o'er the public magazines preside
And some are sent new forage to provide,
Some nurse the future matron of the state.
All with united force combine to drive
The lazy drones from the luxurious hive,
Some employed at home, at side within the gate
To fortify the combs, to build the walls
To prop the ruins, lest the fabric falls.
But late at night, with weary pinions come,
The lab'ring youth, and heavy laden, home."

USES OF BEES.

We cannot too earnestly urge upon farmers the importance of keeping Bees on all farms and gardens.

Besides supplying a rich treasure in honey and wax, bees are highly useful, in many cases absolutely essential, in fertilizing many fruits and plants by transmitting the pollen from one blossom to another; this is a well settled fact among fruit growers and bee keepers. Then there is large profit from careful keeping of bees. The following from the *American Bee Journal*.

Hartford, N. Y. May 7, 1877.—"I have run my apiary for both extracted and box honey. Honey mostly from white clover; but little basswood and fall pasturage. I winter in a dry cellar. The following is my report for the past year ending May 1st:

Dr.	
To 53 swarms of \$10	\$ 530.00
40 hives at \$2	80.00
Improvements in bee house and yard	200.00
Steam engine, 1½ h. p.	175.00
Honey extractor	10.00
Wax extractor	4.00
Cart	10.00
Tools, etc	35.00
	\$1044.00

Cr.	
By 3000 lbs. extracted honey, at 14½c	\$ 435.00
1200 lbs. box honey, at 20c	240.00
16 swarms (sold bees only) at \$5	80.00
20 lbs wax at 30c	6.00
90 swarms, in fall, at \$3	35.00

Total Cr.	\$1481.00
Total Dr.	1044.00

Balance in favor of Cr	\$ 437.00
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"During the past winter I lost 2, and found 4 queenless, which were united with others. I have now 83 swarms. Those that were doubled in the fall, came out extra strong. I hope to make balance in favor of Cr. show better this year. Bees have wintered well here."

J. H. MARTIN.

LADIES DEPARTMENT.



A Chat with the Ladies for January.

WINTER.

Where are the flowers? where the leaves?
 Where the sweet zephyr's gentle breath?
 Where the low'd fruits and golden sheaves?
 Dead, dead; all icy bound in death!
 Is Love too dead? Hence, needless pain!
 Love only sleeps to wake again.
 Love dead? Ah no, not so with Love!
 Love only dies to live above.

A happy New Year! to each one of my gentle readers, with the wish that they may all enjoy the winter pleasures of the town and country—in social gatherings, in sleighing and horse-back exercise during the clear, bright and bracing winter days, and in skating—that wholesome, graceful and recreative accomplishment. Among the in-door pleasures, let me suggest the practice of a comparatively new art or amusement for ladies and the young people, called *Declomanie*. It is simply transferring pictures which have been printed no paper in striking brilliant colors. The objects represented are small and appropriate adornments

for fans, work boxes, vases, flower pots, card stands, articles of furniture, &c. When transferred—these pictures are more attractive and beautiful on the articles ornamented, than if painted with a brush, unless a skillful artist had executed them. They embrace a great variety of subjects, such as heads, landscapes, animals, birds, bees, insects, flowers, comic figures, fishes, &c. It is an art easily learned and children soon take delight in it and become experts.

A plain cup to-day becomes in a few moments a highly ornamented thing of pleasant amusement, or almost an object fit for the cup-board of articles of vertu. Or a plain fan is soon converted into a brightly ornamented one. The pictures with directions for use are to be had at very low prices and in infinite variety.

Winter is an excellent season to learn the art of cookery. It can be learned at home as well as in a school or nearly so. Get a first-class cook-book like Mrs. Randolph's or Mrs. Howard's and practice under the advice of one who has had long experience. This practical learning will save many an heart-ache and dreadful vexation when the cares of a household are suddenly thrust upon them. I am glad to see that the art of cookery is being taught in schools for that purpose in England, in which the Queen and several distinguished members of the Nobility have taken an active interest, of late, so as to encourage the teaching of the art of cookery to the common people.

A National Training School for Cookery has been established. Its first object is to instruct teachers, somewhat after the manner of Normal Schools. Twenty-five lessons are given. The following is the routine of the first week:

"Beginning at the beginning, pupils on joining the classes are taught the best way of lighting and managing a fire, cleaning a fire place, regulating a flue, and managing an oven. They are next inducted into the mystery of obtaining 'the highest degree of cleanliness in pots and pans.' Proceeding next to the lecture-room, they are taught in plain, practical words how cooking is done, various articles being prepared and cooked in their presence. In the first week, Monday is devoted to the art of roasting; Tuesday to the concoctions of soups and broths; Wednesday to the contrivance of *entrees*; Thursday to the cooking of vegetables; and Friday to the confection of jellies and cream."

What a blessing it would be to have such schools in all parts of our country! Young ladies do set the fashion, and ye will receive your reward speedily.

As ever desirous to contribute to the comfort of my readers I must call attention to a new household contrivance.

The asbestos stove, is a little affair—cost \$1 50—and a treasure in a household. In summer when there is a desire to have as little fire as possible and in winter when it is hard work to get fires kindled in the mornings, this invaluable stove comes into play as a God-send. Asbestos is a wonderful and lately utilized fibrous mineral; it resists heat and steam. Fire has no effect upon it. The little stove I speak of is so small it can be put in a man's coat pocket, yet with one or two tablespoonful of alcohol or spirits of wine, poured on the asbestos and touched with a lighted match, a few eggs, or beefsteak, or chops, can be cooked, bread warmed, and coffee made hot, in the short time, that it takes to make one's toilet, provided that all is prepared ready for use over night and as soon as one gets out of bed he pours on the asbestos the alcohol, and as he dresses, attends to the preparation of the several dishes required. The whole time will not occupy twenty-five minutes, as the heat is intense, yet it does not scorch or burn steaks or bread like wood or coal fires. It is indispensable to the comfort of mothers, who in case of sickness of children or other members of the family requiring warm drinks at short notice.

It is hoped that most, if not all of my lady friends, have those lovely accompaniments to home comforts and house decorations—plants and flowers in windows or cold pits, or temporary green houses,—I give the following from the renowned florist *Jas. Vick* of Rochester, N. Y.

HOUSE PLANTS.—Most of our plants are injured by too much heat. For a general collection of house plants, it is not best to allow the thermometer to be above seventy, and if they could be kept in a room where the thermometer would usually not range much above sixty-five it would be the better. In the night time fifty is enough. Give a little fresh air every fine day, and all the sunlight attainable. An effort should be made to give moisture to the atmosphere, for our own good as well as the health of the plants. This can be done in various ways by evaporating water; but when the plants are in a separate apartment, like a little green-house, it can be done more conveniently and effectually, although this separate apartment be only a bay window, with glass doors separating it from the living room. In this place water can be used freely, by syringing, etc., and a moist atmosphere preserved. The temperature, with this arrangement, can be kept lower than would be comfortable in the living room, and the plants are saved from dust and many evils which we manage to endure and live, but which generally prove too much for the plants.

I append the following truthful rhymes for the benefit of children, hoping that it may set their young minds to thinking of the wonders of nature and the inscrutable ways of Nature's God in revivifying plants as typical of man's resurrection.

UNDER THE SNOW.

What is there going on under the snow?

Under the silent and echoless snow!

Strange things are happening down there; I know.

"Ha! ha!" laughs Willy. "And who told you so?"

Something is growing there, under the snow—

Under the feathery, powdery snow—

Something for Willy and Lily; I know.

"Ha! ha!" laughs Willy. "Things grow in the snow!"

Why, down there under the cold, freezing snow
All the ground's hard as a rock! Guess I know."

Still it is growing—down under the snow.

Swelling and growing, beneath the pure snow.

Growing for—O! the whole world. So I know.

For I saw grandpa, ere fell the soft snow—

Nourishing, enriching, beautiful snow—

Lead out the sowers his wheat-seed to sow.

Over the fields where now lies the pure snow.

In the brown ridges now covered with snow.

Down dropped the grains in their earth-bed so low.

Bright summer suns shone, ere came the chill snow.

Soft autumn rains fell, before the still snow,

All of them help the seed growing—I know.

Something is going on under the snow,

BREAD! BREAD is growing there under the snow.

"Ha! ha!" laughs Willy. Why, surely 'tis so."

The following, are capital recipes for what they are intended, and having enjoyed them about this time of the year, I can safely recommend them.

Sauce for Wild Duck.—One tablespoonful of mixed mustard, a tea-spoonful of anchovy paste, a pinch of cayenne pepper, a table-spoonful of mushroom catsup, and a wine glassful of claret, for each duck. Mix the mustard with the anchovy paste, thoroughly in a sauce pan, add the cayenne, then the catsup—a few drops at a time; the claret last; heat gently over a clear fire. Slice the breast of the duck and pour the sauce over it very hot. This sauce is good for mutton, venison, tame duck or deviled turkey legs, or broiled bones of any sort. The latter makes a delightful late supper.

Oyster Sauce.—Boil the oysters in their own liquor until they look plump, then take them out and strain the liquor; add to it wine, vinegar, pepper and a little salt and butter to your taste and pour over the oysters. It is a nice sauce for most boiled meats, especially turkeys.

Christmas in our Hearts.

As the years come and pass away, each one brings new experiences; each one brings newer hopes and fresher dreams, and brighter joys, aye! and each brings with it wearier hours, and deeper griefs to all of us.

It may be, that in looking back upon the years that have thus come and passed away, some seemed to be filled with brightness, and with happy hours, and if not with joy and gladness, with a quiet peace at least. It may be, that in some, the sorrows have been pressed so close, we would wish indeed, the memory of them, even, to be but the memory of a troubled dream, that came and passed away forever in the brightness of the wished for morning.

But whether, in the years that have so silently flowed by, there has been "more of sunshine than of shade," whether the shadows be long and dark, or the lights and shades have harmonized and blended, amid them all, and through them all, the happy Christmas-times stand out and bless the past; and as the full years roll so quickly on, each Christmas-time seems to press closer still, and tread upon the last, each may bring new joy and happiness to all our hearts.

But brightest, happiest of them all, stand out our childhood's Christmas days, so long in coming, and so quickly passed. O wonderful, mysterious, golden Christmas times! O Santa Claus, so feared, yet so adored—O strange and happy time! yet filled with such anxieties, such joyous hopes, such feverish excitements, as the long, long days move on, before the happy time would come. Days, far too short for the grown up people, but so long in passing for the children. O busy streets, with busy people hurrying up and down; people with boxes and bundles! people with dolls and cradles, and drums; people with everything under the sun, rushing and pushing, and looking and buying. Oh! the bewildering shops, each shop a wonderful world with every wonder in the world. Forests and towns, cities and farms, arks and cottages, side by side—armies on land and ships on sea; babies and horses and dogs, muskets and fifes and drums. And then the mysterious budgets, little and big and high, flat and square and round; and O, the restless wonder, what could be inside?

At last comes Christmas-eve, too bright and beautiful to be so short, and fade so soon away. Beautiful Christmas tree, glowing with brightness and bending with blessings for all.

Strange Santa Claus, to know so well, and be so kind and good. Dear Santa Claus! to come to all

and not forget the poorest, for to-night, they too may find a comfort and a gift. But Christmas-day there comes a tenderer, holier joy, even to our childish hearts; and O, the blessed Christmas bells so loud, so clear, so joyful and glad—never, never weary of the old story; glad to ring it out again—out in the frosty air, out in the dim, grey, wintry morning of the blessed day; out, even on the mountain tops, deep through the deepest snows, they ring it once again—beautiful holy bells—"Kris Kringle," the Christmas child is with us! "and the Angels bring even to us little ones, 'good tidings,' and our joy is great."

With what a sacred, tender love, we learn to love the child CHRIST JESUS! the loving one, sent from the loving FATHER—the little Child that came and was "one of us," yet ever lives and ever loves, and loves the little children most.

And so we come to learn the lesson of the Saviour's birth, and listen to the wonderful old story of the Manger and the Babe. And so our happy childhood, and our childhood's Christmas days pass by. Would that our childhood's Faith and Hope and Love would never pass! Would that even to old age, we still might keep a trusting child-like heart! Would that it might always be "Christmas in our hearts;" for are not blessings ever sent? And do we not, each Christmas day, find some heart near to cheer and bless, and so make glad our own?

Each Christmas day may find us each, with some new friend or fellow traveller on Life's way, to whom, if nothing more, we still can give a smile, or look, and bid "God speed." And if not these, we have the little children ever near and with us, whom we may bless, receiving still, from them, blessing and cheer in turn. So even should there still be places in our hearts made sore and tender, even though vacant places at the fireside, tell of dear departed ones. This Christmas time seems still to draw them closer to us, and low sweet voices whisper from the far off past in quiet memories to our waiting hearts. And so, in joy and in gladness; in comfort and in peace, and dearer still in sadness and in sorrow, these Christmas times still bless the past, and stand out clear, above all other times, as stepping stones along the path we've trod.

STANNO.

BES DO NOT INJURE FRUITS:—At a recent meeting of the *Societe Centrale d'Apiculture et d'Insectologie*, M. Trouillet said that the accusation of the bee as the injurer of fruits was not justifiable: he certified that the bee does not attack sound fruit; that it only sucks injured fruit or such as have been punctured by the sparrow or the earwig or that the rain has caused to crack open.

For the Maryland Farmer

LIFE'S CHANGES.

"Tis change, change, change,
And change that's fraught with woe,
And change, change, change,
Is winter on all below."

A happy New Year to all! life ever points to the future; and vast and indescribable are the glorious visions that crowd upon our fancy—but year by year, nature repeats her story, and warns us by her significant changes, of the inevitable future Spring, with its blue sky, green grass, and singing birds, changes rapidly to the fervid sun and golden harvests of summer and autumn, soon haunts her gorgeous drapery all about us; and the luscious fruits drop from overburdened boughs. But the forest leaves blacken and fall, sullen clouds overcast the sky, and chilling winds and driving snow, wrap the earth in winters icy mantle.

Year after year passes by, and we scarcely note the change. "The merry New Year's greetings are still ringing in our ears, when another sweep of the wing of that great Angel, who earthward bound, hears the proclamation, that time shall be no more," warns us, another year has passed away, and brought its changes, and left its traces, wiping away old memories, with new experiences raising up one, bowing down another; bearing cups of joy to some and clothing others in weeds of mourning.

"It is the seed time of a harvest, that shall not be fully reaped and garnered, till the stars, now throbbing and flashing in all their beauty, shall flicker and fall"—every passing year shortens on "The voyage of life" and brings us nearer the other shore. What a pleasure it will be to look astern upon a shining course, and to contemplate in the seaward distance through which we have floated in the summer of life; the light of our good deeds as a lingering moonlight on the sea. A part of the voyage we have already accomplished, we are toiling on, the breezes of life are filling our sails, and life's changes are whispering softly in our ears, that sooner or later our New Years greetings will end; then God grant us! a happy meeting in that blessed land, where our life's stream shall mingle in the great ocean of Eternity.

WICOMICO.

LIFE'S CHANGES, So touchingly and poetically descanted upon by our much valued lady correspondent, WICOMICO—will be read with subdued pleasure by our lady friends, as true to the life of most of us, and as a sisterly reminder that we should never forget, that changes are hourly occurring, and we should so live as always to be prepared to meet them like Christians who put their whole faith in the goodness of God.—Eds. Md. Farmer.

RECIPES FOR FARMERS.

TAR WATER FOR INSECTS:—For the last five years I have not lost a cucumber or melon, vine or cabbage plant. Get a barrel, with a few gallons of gas tar in it; pour water on the tar; always have it ready when needed, and when the bugs appear give them a liberal drink of the tar-water from a garden sprinkler, or otherwise, and if the rain washes it off and they return, repeat the dose. It will also destroy the Colorado potato beetle; and frighten the old long potato bug worse than a threshing with a brush. Five years ago this summer, both kinds appeared on my late potatoes, and I watered with the tar water. The next day all Colorados that had not been well protected from the sprinkling were dead, and the others, though their name was legion, were all gone, and I have never seen one of them on the farm since. I am aware that many will look upon this with indifference, because it is so cheap and simple a remedy. Such should always feel both their own and their neighbor's bugs, as they frequently do.—*Chicago Tribune.*

Liniment For Horses With sore Backs:—The inner bark of white oak bark boiled down in an iron kettle (never a brass one) until it is as black as ink; while boiling drop in a piece of alum, about the size of a hen's egg; apply with a sponge, very handy to keep about the stable, good for any sore.

A gentleman writing to the *Planter and Farmer*, gives the following remedy for a choking cow. We suppose it will act as well with other animals, and will be well to remember it. He says that it has never failed in any instance, and has been tried by him and others hundreds of times. The remedy is to take a tablespoonful of saltpetre, open the animal's mouth, and throw it well back upon the tongue, let the animal go, and it will either go up or down in a very few minutes.

COVERING STRAWBERRIES.—Evergreen branches are more useful for this purpose than any other covering which we have employed. If not put on so thickly as entirely to exclude light, they are less liable than anything else to injure the plants by smothering. Straw is apt to become packed flat on the strawberries after a soaking rain. Dry leaves are still worse by excluding air and light. The same fault exists with manure. By using a thin covering of evergreens, the strawberry plants will come out in a vigorous condition with bright green foliage, and not brown and injured like those which are exposed to all the changes of freezing and thawing. The evergreens are easily applied, and removed, and leave the bed clear.—*Country Gentleman.*

DOMESTIC RECIPES.

SAUSAGES:—To 24 lbs. of lean pork and 8 lbs. of leaf-fat, well chopped or ground together, put 6 ozs. of salt, 1 oz. of black pepper, 1 teaspoonful of sage, 4 of thyme, 1 of sweet marjorum, intermix well. If desired in cases, add warm water enough only to let the mass be soft enough to pass from the stuffer into the casing easily. Then link them and air-dry for a few days,—when boiled they will be full of rich gravy. Some prefer to smoke them well and and fry them. When smoked they will keep all winter.

POPOVERS:—Three cups of milk, three eggs, three cups of flour, a little salt and a piece of butter the size of a hickory nut, bake in greased cups, filled, not quite full; eat when hot with wine sauce, or simple butter, sugar and nutmeg, or syrup alone.

OUR RECIPT FOR MAKING SAUER-KRAUT;—The best we ever ate we make ourselves and have done so for many years, and for a considerable time with our own hands, and always from Savoy cabbage, It was manufactured in this wise: In the first place let your "stand," holding from half a barrel to a barrel, be thoroughly scalded out; the cutter, the tub and the stamper also well-scalded. Take off all the outer leaves of the cabbages, halve them and remove the heart and proceed with the cutting. Lay some clean leaves at the bottom of the stand, sprinkle with a handful of salt, fill in half a bushel of cut cabbages, stamp gently until the juice just makes its appearance, then add another handful of salt, and so on until the stand is full. Cover over with cabbage leaves, place on top a clean board fitting the space pretty well, and on the top of that a stone weighing twelve or fifteen pounds. Stand away in a cool place, and when hard freezing comes on remove to the cellar. It will be ready for use in from four to six weeks. The cabbage should be cut tolerably coarse. The Savoy variety makes the best article, but it is only half as productive as the Drumhead and Flat Dutch.—*Germanstown Telegraph*

CURING HAMS;—Almost every farmer has his favorite method of curing bacon, nor do we propose to treat of that subject here, except that if he desires to have his hams extra fine he will secure his object best, perhaps, by pursuing the following course;

Have well-fatted pork, and after allowing it one night to cool, cut up and round off the hams to proper shape, and for every one hundred pounds

take from eight to ten pounds of salt, two pounds of brown sugar, two ounces saltpetre, and one ounce of ground red pepper. Mix these ingredients together, dissolving them in about four or five gallons of water to every hundred pounds of hams, or just enough water to cover the meat when placed in a hogshead, but strong enough to float an egg.

After laying in the brine about five or six weeks take out the hams, hang up, and smoke with green hickory wood until they have acquired a bronze color, or such as will suit the fancy.

Early in March, or before mild weather has started the flies, take down the hams and, after wrapping each one in paper, place them, hock downwards, in bags, well tied, and hang up till wanted for use.

The middlings and shoulders, though less important than the hams, may be treated in the same way with advantage; but the hams, being more subject to injury from the flies, as well as more choice, demand a little extra attention, and none has proved more effectual than the above or called forth more special encomiums.—*Baltimore Sun*.

TO MAKE A VINEGAR PLANT.—A farmer's wife says: My way is simply to tear brown paper into strips of eight or ten inches long, and four or five in width; dip them into West India molasses, so that both sides shall be covered. To three gallons of cider I put in six of these pieces and set the jug where it will keep almost milk warm for about ten days. You will have good sharp vinegar that will keep. The paper saturated with the molasses will form a mother, and a piece of it put into sweetened water makes a nice vinegar plant that will grow rapidly, and keep a supply of very good vinegar if kept in a warm place.

CATALOGUES RECEIVED.

Lanareth's Rural Register and Almanac, for 1878

From the agent, Wm. Hipkins, Balt. a circular about "The Condimental Food" for stock.

From August Rolker & Sons, New York, catalogue of select Flower Seeds.

From Waite, Burnell, Huggins & Co. London, England, catalogue of Bulbs and Seeds.

From Ernest Benary, Erfurt, Germany, catalogue of Trees, Agricultural Seeds, etc.

From Hurst & Son, London, catalogue of Novelties in the Vegetable line for 1878, also one of Flower, Seed and Plant novelties.

PUBLICATIONS RECEIVED.

VICK'S ILLUSTRATED MONTHLY MAGAZINE.—This is a new publication beginning with January, 1878. It has 32 pages of exceedingly pleasant reading, profusely illustrated with fine engravings and every issue to have an elegant colored plate of some flower or cluster of flowers, true to nature, that the best artists can produce.

The paper and typography are both very superior. It will make a fine ornament for the centre table of a parlor, and the most of useful information its contents will well repay perusal and study. The initial number lies before us. We greatly admire it as we do all that emanates from the pen of the veteran Florist, and his great establishment in Rochester.

The low price of \$1.25 per annum, will enable every person who loves flowers, and takes interest in garden vegetables, to secure a copy. We heartily commend it to our readers and hope it will meet with the great support it really merits.

THE AMERICAN POULTRY YARD.—An excellent weekly illustrated journal for 1878, has already issued its first number, dated January 12, 1878, Hartford, Conn., published by H. H. Stoddard, at \$1.50 per annum. It is very creditable to the publisher, and will prove, no doubt of much benefit to poultry raisers. It is issued from the same office, and somewhat in connection with that splendid monthly magazine, the Poultry World, which now enters on its 7th year. The 12 elegant chromos each year, are worth alone, more than the cost of either paper. Both these journals will be sent, with 12 chromos, for \$2.75, or the two without the chromos, for \$2.00.

HANDBOOK FOR PRACTICAL LANDSCAPE GARDENING, by F. R. Elliott, published by D. M. Dewey, Rochester, N. Y. It is a neat, handsomely printed and illustrated book, filled with plain instructions that are indispensable to the beginner, and therefore, should be in the hands of every man in the country who is adorning an old residence, or laying off a new place, with a view to ornamentation after rules of correct taste.

O'ER THE SHORN FIELDS, a ballad, by Max Beyser, from D. P. Faulds, publisher Louisville Ken.

From the same, 'T WAS A MOONLIGHT MY LOVE; a beautiful song.

From Alfred Gray, Secretary, the monthly reports of the Kansas State Board of Agriculture, for August, September and October 1877.

WHAT ANAESTHETIC SHALL WE USE? By Julian J. Chisholm, M. D., a treatise read before the Baltimore Academy of Medicine.

THE POPULAR LANDSCAPE GARDENER, by F. R. Elliott., The Prospectus sent us by D. M. Dewey Rochester, N. Y.

PRETTY LITTLE BLUE-EYED STRANGER—a sweet song; the melody is captivating, 35 cents, publisher, F. W. Helmick, Cincinnati.

MARYLAND COLLEGIAN.—A neatly printed paper and really well edited, gotten up by the students of St. John's College—"Long may it wave!" Their motto is classic and admirable: "Est Nulla Via Invia Virtute"—let each of the forthcoming Alumni hold to that principle, and the ancient seat of learning, at the capital of the State, will turn out men like their predecessors, worthy the honor and glory of Maryland.

Prospectus of the forthcoming "Flower and Fruit Magazine, to be issued as a monthly from Washington City, commencing with January, 1878; edited by D. S. Curtiss & Co. We wish it every success, as it, no doubt, will prove very beneficial to the interests of florists and horticulturists.

THE GAZETTE

BALTIMORE.

ANNOUNCEMENT FOR 1878.

The Publisher takes pleasure in announcing that THE GAZETTE for 1878, will be more than ever a newspaper for the people. It will be his aim to constantly strengthen its corps of writers, increase its news facilities, and enlarge its sphere of activity. As heretofore, it will be a first-class morning journal, democratic in principle, independent in everything, neutral in nothing, opposed to all monopolies and the unpromising foe of all corrupt rings in municipal, state and national affairs. It will be the unyielding advocate of economy and reform in every department of government, and will fearlessly condemn that which deserves rebuke and cordially commend that which commands praise, without stopping to inquire what political party is affected thereby. The news feature of THE GAZETTE will be, if possible, more striking than ever. A regular news bureau has been opened in Washington, and the special correspondence from the national capital will be unexcelled by that of any journal in the country. Its special dispatches will cover every news centre of importance, while the Associated Press will furnish it with the latest advices from all parts of the world. Its local reports will be the most complete that can be obtained, and its miscellaneous matter will be of a character to interest all classes of readers. Special attention will be paid to the collection of news in Maryland and the adjoining states, and in this particular THE GAZETTE will be far in advance of any of its contemporaries, aiming to be a live newspaper in every respect, and furnishing the fullest and freshest news and general reading matter at the lowest possible cost to the public.

THE DAILY GAZETTE is delivered in the city of Baltimore and surrounding cities, villages and towns, for TWELVE CENTS PER WEEK, payable to the carriers. Mail subscriptions, \$6 a year, \$3 for six months, \$1.50 for three months, or 60 cents a month, postage prepaid at this office.

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